# BUSINESS WEEK

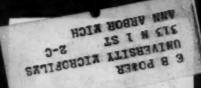
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Special Report



A McGRAW-HILL PUBLICATION

JUNE 16, 1956





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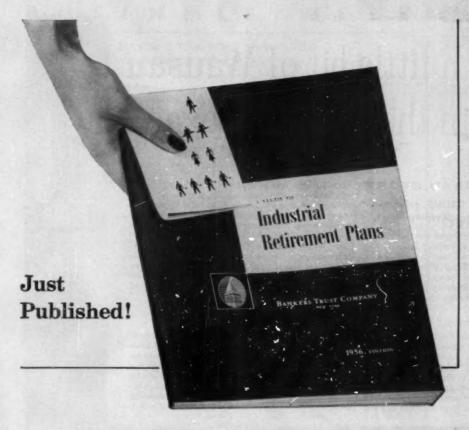
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## FIGURES OF THE WEEK

1947-49=100	12 12 14		. 17	247-49=10	160
					150
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n 19	56				130
					120
1951 1952 1953 1954 1955	M A M	1 1	A S	0 N	110
	1946 Average	Year Age	Month Ago	Week Ago	§ Late Wee
JSINESS WEEK INDEX (chart)	. 91.6	142.2	146.4	†145.6	*146
ODUCTION	1.001	0.017	0.045	40.000	
teel ingot (thous, of tons)	1,281	2,316 172,794	2,345	12,380	2,3 140,8
ngineering const. uwards (Eng. News-Rec. 4-wk daily av. in thous.)	\$17,083	\$62,307	\$73,871	\$61,881	\$71,0
lectric pewer (millions of kilowatt-hours)	4,238 4,751	6,600	10,837 7,029	10,598 7,037	10,9
Stuminous coal (daily av., thous, of tons)	1,745	1,576	1,665	1,687	1,6
aperboard (tons)		282,825	294,894	272,725	290,4
ADE	- 1	1 24			111
Carleadings: miscellaneous and L.J. (daily av., thous. of cars)	82	77 55	74 54	74 57	
Carleadings: all others (daily av., thous, of cars)	+30%	+5%	-7% 258	+3%	+7
IICES					
Spet commedities, daily index (Moody's, Dec. 31, 1931 = 100)	311.9	404.9	420.2	412.4	415
industrial raw materials, daily index (BLS, 1947-49 = 100)	††73.2	91.8	96.8	92.9	93
Foodstuffs, daily index (BLS, 1947-49 = 100)		87.0	82.3	81.6	19.
Print cloth (spot and nearby, yd.)		18.8¢ 144.8	19.2∉ 158.0	19.0¢ 158.2	151
Scrap steel composite (Iron Age, ton).		\$34.00	\$50.33	\$45.83	\$44.
Copper (electrolytic, delivered price, E & MJ, lb.)		36.000∉	45.915∉	45.260¢	45.01
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.)	\$1.97	\$2.41	\$2.27	\$2.13	\$2.
Cetten, daily price (middling, 14 designated markets, lb.)		33.79¢ \$1.85	35.57¢ \$1.72	35.54¢ \$1.72	35.5 \$1.
NANCE				. 113	
90 stocks, price index (Standard & Poor's)	135.7	313.4	370.9	362.3	364
Medium grade corporate bond yield (Baa issues, Moody's)	3.05%	3.51%	3.73%	3.75%	3.75
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate)	%-1%	2%	31/4 %	3%%	3%
ANKING (Millions of Dollars)				ec co1	***
Demand deposits adjusted, reporting member banks	††45,820	56,374	55,559 84,887	55,521 84,724	55,6 84,7
Commercial and agricultural loans, reporting member banks	††71,916	84,012 22,623	28,031	27,784	27,5
U. S. gov't guaranteed obligations held, reporting member banks	1149,879	32,831 25,044	26,939 25,325	26,873 24,995	26,7 25,3
ONTHLY FIGURES OF THE WEEK		1946 Average	Year Ago	Month Ago	Late
	lay	55.2	62.7	65.2	6
Unemployment (in millions)		2.3 \$43.82	2.5 \$76.30	2.6 \$78.99	\$78
Private expenditures for new construction (in millions)		\$803	\$2,571	\$2,365	\$2,
Public expenditures for new construction (in millions)		\$197	\$1,104	\$986	\$1,
	lay	55.9	137.6	106.0	10
Wholesale prices (U. S. Dept. of Labor BLS, 1947-49 = 100)		78.7 \$812	109.9 \$1,264	\$1,576	\$1,
celiminary, week ended June 9, 1956. + Estimate, crited.				1 - C - T - T - T - T - T - T - T - T - T	on requ

THE PICTURES—Cover—Ivan Massar; Grant Compton—183 (top); Goodyear Tire & Rubber—194 (top); Jim Fox—150 (bottom); Neil Co.—194 (bottom); INP—23 (left); 24 (second from bottom); Ivan Massar—66; Don Ornitz—74; Bob Phillips—165; Stevens—184 (bottom); U.P.—23 (right); 24 (top); 24 (bottom); WW—24 (second from top); WW—28; 30, 31; Geo. Woodruff; 150—Len Weernberg.



#### ANALYSIS OF PLANS IN THESE AND 75 OTHER INDUSTRIES

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Maximum Pensions Minimum Pensions

Method of Funding

Plus actual case history reference tables

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# There's a little bit of Wausau deep in the heart of <u>Texas</u>

#### A WAUSAU STORY

by PAUL CRUME, columnist The Dallas Morning News

"I write a column for the Dallas Morning News called BIG D. Big is a word we use a lot here in Dallas and Texas. When I got onto

this Wausau story I looked for a big angle. They count only about 30,000 souls up there in Wausau, Wisconsin. That includes those who have

gone fishing. But when I got to talking to some of the people who represent Employers Mutuals of Wausau here in Texas, I found a bigness. It starts with a way of doing business that Wausau people bring from their own town. Maybe folks who see so much ice and snow just naturally have warm hearts. Maybe a spirit of fairness is inherent in a company founded where the fishing's good and it's only a stone's throw to where the deer run. I agree with their policyholders who keep saying Employers Mutuals are 'good people to do business with.'"

"Oil is big in Texas. I found that Employers Mutuals is big as insurers of oil well drilling operations. In the lower right hand picture you see Mark Johnson (right), supervising engineer for Employers Mutuals, in a typical safety session. He's with W. V. Phipps, driller for G. E. Kadane & Sons. Johnson often stays 'round the clock with the rigs in the field on accident prevention work. It pays off for the policyholders. I was interested to learn that this Kadane

rig number 2 in Texas has won a safety certificate of merit for their second year without a lost-time accident. Johnson told me Kadane's workmen's compensation savings are substantial and that these savings go into a fund for Kadane employees. So closely does he work with his oil-drilling policyholders that Johnson is a recognized authority in the field. Pretty much typical of the Wausau way of doing business."



"Pretty 'Maid of Cotton' gets economics lesson. Miss Patricia Ann Cowden, 1956 'Maid of Cotton' had 26 suit-cases filled with cotton dresses when she came to Dallas on her nation-wide tour. Over at the Dallas Cotton exchange where they are pictured, Mr. C. E. Archibald, Employers Mutuals' Dallas branch manager, pointed out to her some interesting economic facts about those cotton dresses. For example Employers Mutuals and the insurance industry contribute to the good value in all cotton products. Employers Mutuals' accident prevention program in cotton mills helps lower the cost of production. I learned that the Wausau way of doing business is well known in all phases of the cotton industry—cotton plantations, cotton gins as well as cotton mills.<sup>22</sup>



Employers Mutuals, with offices in 90 cities writes all lines of fire and casualty insurance. We are one of the largest in the field of workmen's compensation. For further information see your nearest representative or call us in Wisconsin on our line, Wausau 2-1112.

Employers Mutuals of Wausau



"Good people to do business with"

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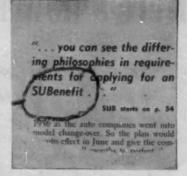
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## READERS REPORT



#### No SUBstitute

Re your heading (see above) for the article about SUB [BW-June 2'56,p61] How do I say it-"an S.U.B. Enefit" or "an S.U. Bene-

E. F. HUBBARD

EDITOR HAT LIFE NEW YORK, N. Y.

## A Good Beginning

Dear Sir:

You referred to Hawaii's fine new farm unemployment insurance program [BW-Apr.14'56,p66] as. reportedly the first in the U.S." Actually Puerto Rico began an unemployment insurance program for sugarcane workers several years ago, in May 1948. The Puerto Rican program provides weekly benefits of \$3 for workers in the agricultural phase of the sugar industry and \$5 for workers in the factory phase, for a maximum period of nine weeks during the offseason. Although these amounts can hardly be considered adequate, we feel that it is a good beginning and that it probably was the first farm unemployment insurance program in the U.S.

PHILIP A. HOLMAN CHIEF, INFORMATION SECTION DEPT. OF LABOR COMMONWEALTH OF PUERTO RICO NEW YORK, N. Y.

## Competition Develops

Dear Sir:

We wish to take exception to your article entitled Film Furor [BW-May12'56,p61].

Our company has been processing Kodachrome film for almost a year and numbers among our customers many of the leading photofinishers throughout the U.S.

We are currently operating on a

# Here's how Du Pont MYLAR° is helping



TEXTILES. "Mylar" polyester film is used as the base for an improved type of metallic yarn. It provides extra strength for weaving or knitting . . . resists normal textile chemicals used in dyeing. "Mylar" is opening new markets for manufacturers of finished garments by removing past restrictions on metallics in fabrics such as wools and cottons.



DECORATIVE SURFACING.—Used as a surfacing material, "Mylar" adds beauty and long lasting luster to a wide range of consumer products. Flexible "Mylar" can be metalized. It can also



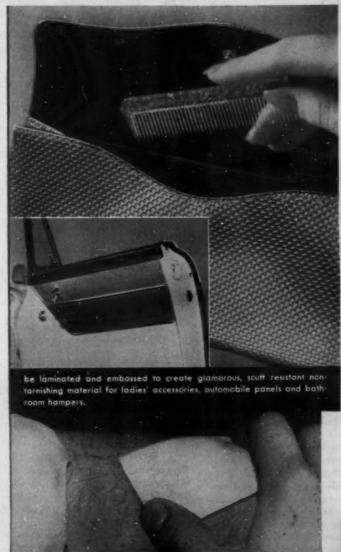
PACKAGING. "Mylar" is a tough film for tough packaging jobs. With "Mylar", heavy, bulky and irregularly shaped objects, such as blankets, toys or hardware items, can now capitalize on the impulse value of transparent packaging.



ELECTRICAL. "Mylar" is ideal for use as an insulating material in electrical-electronic equipment. It combines high dielectric and physical strength with resistance to chemicals and moisture. Thinner gauges of "Mylar" are helping manufacturers reduce size, weight and costs in products such as motors, transformers, coils and capacitors.



# industry improve product performance



MEDICAL. For the first time, surgeons have an absorbent bandage that will not adhere to the skin. Non-toxic perforated "Mylar" is placed over the wound, permitting fluids to flow into the cotton to which the "Mylar" is laminated.



RECORDING TAPES. Tapes with "Mylar" are used in recording sound and now video. These tapes are thinner, yet stronger, and are unaffected by changes in temperature and humidity as demonstrated in "tape torture test" above.

## CAN I USE "MYLAR" IN MY PRODUCT?

Whether you make ladies' lingerie or guided missiles, there may be a way to add value to your product . . . to make it more profitable...by using Du Pont "Mylar"\*. This remarkable polyester film has a balance of properties never before available in a plastic material. For more information on applications, properties and types of "Mylar" available, send in the coupon below. Be sure you indicate the specific application you have in mind.

"Mylar" is Du Pont's reg, trademark for its brand of polyester film, Names of firms who manufacture the products pictured here available on request.

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# Why 402 U.S. manufacturers now enjoy 100% tax



Governor Muñoz tells why Puerto Rico offers such amazing incentives to new or expanding manufacturers.

"In this statement, I shall try to explain Puerto Rico's economic position as frankly as I would to any manufacturer or labor leader who met me face to face.

Puerto Rico is currently making a determined effort to stand squarely on its own economic feet. At present we do not have nearly enough jobs to support our people. We are therefore directing every energy to create more jobs at home, and to curtail migration to the States.

That is precisely why we are going all out to attract every new plant we possibly can. But, to date, we are still providing only 25% of the new jobs we need each year to keep pace with our expanding labor force. I shall go into details later. But first I want to make two points of my Government's policy absolutely clear:

- 1. Puerto Rico has no intention of winning industries away from anywhere. We do not grant tax concessions to runaway plants.
- 2. Puerto Rico's Industrial Development Plan is based on a combination of absolutely ethical incentives. We do not and never will hold out low wages as an attraction to business. My Government's firm philosophy is that wages should rise as rapidly as our economic development permits.

Let me now describe our basic problem in more detail."

#### **Our Problem**

"When people talk of over-population as Puerto Rico's biggest headache, they certainly don't exaggerate. Our unemployment is high. Our income level is still low-only 25% of the U. S. average. And every year 20,000 more workers swell our under-employed labor forces.

But this is probably putting the cart before the horse. Our real problem is not over-population but *under*-development. What then is our best solution?"

#### **Our Solution**

"I am convinced that the answer can only lie in more and more industry. Hence we are pinning our major hopes on our industrial development program, as the main pull of what we call Operation Bootstrap.

From the economic standpoint, Operation Bootstrap has but one simple aim—to develop industry, and in doing so, to encourage U. S. manufacturers to expand their operations to Puerto Rico. Operation Bootstrap is, in fact, a bold attempt to increase the well-being of our whole Commonwealth—workers and employers alike. And lest anyone should fear that my country's program might injure the U. S. economy, let me now sound a reassuring note:

- 1. The U. S. already has 65 million employed. Puerto Rico only needs to create 150 thousand new jobs to solve its present problem.
- 2. One half of one percent of normal U. S. industrial expansion would achieve our whole economic program.

I hope these comparisons help to put Puerto Rico's modest needs in proper perspective. But, for good measure, let me quote a few more figures to show how important a prosperous Puerto Rico is to U. S. business itself:

In 1955, Puerto Rico's purchases from the U. S. rose to \$580,000,000. Without Puerto Rico as a customer, New York's gross sales would have dropped by \$67,000,000; California's by \$54,000,000; New England's by \$53,000,000.

So much for statistics. Now just a word about my people, without whose willing co-operation Operation Bootstrap would merely be a sterile dream."

#### **Bootstrap Underway**

"Pay us a visit and I think you will be impressed immediately by the wholehearted faith we Puerto Ricans place in Operation Bootstrap.

We believe in it deeply and thoroughly—and, with practically no exceptions, support its policies right along the line. Thus, I can promise the same eager, cheerful co-operation to every U.S. manufacturer who expands his industry to our Commonwealth.

Scarcely a month goes by that I am not visited by the Mayors of a dozen Puerto Rican towns, all asking for plants to be erected in *their* areas. There's not a community in all Puerto Rico that would not enthusiastically welcome the arrival of a new factory.

For we all realize that though we have made a promising start up the long, long hill to economic prosperity—the summit is not in sight yet. But the Puerto Rican people have squared up to their challenge and are meeting it in good heart."

# in Puerto Rico freedom



## Beardsley Ruml tells <u>how</u> new or expanding industries (not runaway plants) get tax exemption.

START A NEW plant in Puerto Rico and you are not only free from Federal income taxes (they don't apply)—you can be exempt from local income taxes too. Your freedom from Federal taxes is not a concession. It is a Constitutional fact which stems logically from that historic American principle 'Taxation without

representation is tyranny.' Puerto Rico has no vote in Congress, and therefore no Federal income taxes – corporate or personal."

#### **Protected by Two Constitutions**

"Your business is not only protected by the Commonwealth Constitution, it is permanently guarded by all the guarantees of the U. S. Courts and Constitution, too

**Corporate Tax Exemption** 

**Dividend Tax Exemption**\*

If your income after Your net income in

\*Dividends are tax-free only if paid to residents of Puerto Rico by a tax-exempt corporation. Examples are based on Federal rates (Jan. 1, 1956) for single persons.

Your net profit

in Puerto Rico

would be:

8 50,000

100,000

500,000

1,000,000

Puerto Rico

would be:

\$ 10,000

25,000

50,000

200,000

If your net profit

after U.S. Corporate

Income Tax is:

\$ 29.500

53,500

₹45,500

485,500

U. S. Individual

Income Tax is:

\$ 7,760

15,850

25,180

51.180

As for your local income tax exemption, this is an added incentive, offered by the Commonwealth Government to attract new plants that Puerto Rico's economy needs so urgently."

## How you gain from a new plant in Puerto Rico

- A better return. Local tax concessions, freedom from Federal taxes, and lower operating costs will all reflect favorably in your company's balance sheet.
   See table above.
- 2. Abundant, skillful labor. Puerto Rico's labor force totals 644,000. The Commonwealth operates an ambitious vocational training program, which will even screen workers and teach them specially to operate your machines. The adeptness of the Puerto Rican worker in learning precision skills may be judged by the fact that the following famous companies now have operations in Puerto Rico:

Remington Rand. St. Regis Paper. Beaunit Mills. International Latex. Carborundum Company. Shoe Corporation of America. United Drill and Tool. Sunbeam Electric. Univis Lens. Weston Electrical Instrument Company.

3. No currency or customs problems. Puerto Rico is a Commonwealth freely associated with the United States. It is an integral part of the U. S. economic system. You have none of the problems of operating from a foreign country. Movement of goods, money and people between Puerto Rico and the U. S. is as free as it is between the states of the Union. There's no duty on trade and the U. S. dollar is currency.

- 4. Low capital investment. New single-story, low-rental factories are ready to occupy. The government will even build a *special* one for you on a very small down payment. Abundant electricity, gas and water are just waiting to be connected.
- 5. Ideal location. Puerto Rico is served by 30 ocean lines and 8 airlines. It is only 5½ hours by air from New York—less than 4 from Miami. Goods are actually made in Puerto Rico one day and are delivered in Los Angeles the next. The climate is perpetual Spring. Temperature stays around the balmy 70's most of

the year. Swimming, sailing and fishing are superb. Domestic help is plentiful.

#### Is Your Company Eligible?

To find out if your company is eligible for tax exemption in Puerto Rico, call our nearest office:

#### New booklet-free to manufacturers

•	Commonwealth of Puerto Rico
1	Economic Development
	Administration
	579 Fifth Ave., New York 17, N. Y
	Dept. BK-61
	Mail me "Facts for the Manufacturer,
	our report of the advantages of Puerto Rico for plant location.
į	tieo for paint location.
ľ	Vanne
(	Company
F	Product
	Address

## THE PACKAGING NEWSFRONT

Although the Philippines and South America are large producers of vegetable oils, these areas must, rather surprisingly, import large quantities of food oil from the United States. This is because hydrogenated fat, produced here, must be blended with the local oils to provide the right consistency for shortenings.

A major supplier of the hydrogenated fat, which is much like soap flakes in appearance, has adopted Bemis Duotex® Waterproof Bags as the best shipping container. The Duotex Bags, made of laminated textile and paper, provide the extra strength needed for rough, export handling, as well as maximum protection against contamination. They are, however, low in cost.



Previously the fat was shipped in burlap bags with loose, crinkled kraft paper liners. Labor costs of filling and closing were high and the paper liners frequently tore, permitting contamination of the contents. Bemis Duotex Bags cost about the same as burlap-plus-loose-liners, but solve both the labor and contamination problems.

The gals are wearing "bagging" now.

Osnaburg, a nubbled-weave cotton fabric widely known in the home decorating trade as "Bemis Bagging," has been adopted for sportswear by a prominent and imaginative California designer.

The interestingly textured Bemis fabric, which takes dyeing and printing beautifully, is being made into shorts, jackets, sun suits, beach capes and other wearables for the leisure-minded.

For many years, economical "Bemis Bagging," which is Sanforized, has been used by home decorators for drapes, slip covers, table scarves, etc.

You can answer so many needs with Bemis products... both in and out of the packaging field. If you need a package that will increase sales, give better protection to your product, or simply save you money . . . or if you are interested in other Bemis developments in paper, textiles or plastics...consult us. Bemis products meet an astounding number of industrial. commercial and recreational requirements, and new uses are continually coming to light. You may want our engineers to create a new package, or to advise you on packaging methods. Please write us.

Bemis Benis



nationwide basis and instituting pickup and delivery services along with air freight putting our 70,000 sq. ft. centrally located plant no more than twelve hours from any major, and most minor, marketing areas.

Due to the fact that in years past we had manufactured color films of a type similar to Kodachrome, we were ready to process Kodachrome film as soon as it became available under the terms of the consent decree.

All our fully automated web fed processing equipment as well as semi-automatic cutting and mounting machinery has been designed and built by ourselves and at present we have an installed operating capacity of approximately 25,000 rolls per day.

May we make it plain that this is not experimental machinery but actual production equipment which is a result of seven years engineering and research.

Since the volume of Kodachrome sales is not known, we, of course, can give no accurate projections on our sales, suffice it to say that at the present moment we are building equipment that will treble our present installed capacity.

These additional production facilities are nearing completion and we expect they will be operating before the 15th of July.

With reference to the expected confusion in movie film as mentioned in your article, we have been processing Eastman Kodak's CP (Customer Processing) Kodachrome 8mm. and 16mm. movie film for many months. Since the new package is not preaddressed to a processing laboratory as in the past, we anticipate little or no confusion.

Perhaps Eastman Kodak's conduct has been exemplary while processing their product in a competition-free market and although the transition period may show some rough spots, we have every expectation that many benefits will eventually accrue to the consuming public; benefits that can only become available through the competitive efforts that characterize our business system.

ALEXANDER EISEMANN, JR. SALES MANAGER DYNACOLOR CORP. BROCKPORT, N. Y.

## Not So Sweet

Dear Sir:

I read with interest your article entitled Sweetening It For Investors [BW-May5'56,p81].

## When fire struck two department stores...



WITHOUT SPRINKLERS — Half of the first story and all stories above were burned out by fire that originated in a rear shipping room of this unsprinklered 6-story fire-resistive building. Property damage alone amounted to \$408,000.

Fire records are filled with cases of "fire-resistive" buildings—department stores, factories, hotels, hospitals—destroyed by fire, And these records tell only part of the tragic story.

What about your business? Could you survive a disastrous fire? Would insurance fully reimburse you for the loss of buildings, inventory, records, trained personnel, valued customers . . . invaluable lives?

Grinnell Sprinklers stand ready day and night, year after year, to stop fire when it starts . . . during those first few moments when a *little* water will do what tons of water often cannot accomplish later.

When you consider that installation of a Grinnell Automatic Sprinkler System reduces fire insurance premiums from 50% to 90%, it becomes an investment that pays for itself within a few years, and then starts paying you substantial cash dividends.

We shall gladly survey your property and submit an estimate, without cost or obligation. Write or phone Grinnell Company, Inc., 265 West Exchange Street, Providence 1, Rhode Island.

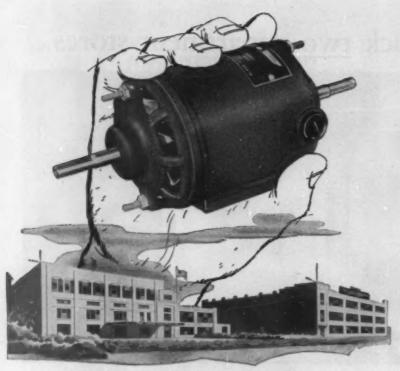


WITH SPRINKLERS — a possibly serious fire was averted in this 12-story main store of Barker Bros., Los Angeles, when one sprinkler head of the Grinnell Sprinkler System completely extinguished a fire in several pieces of display fabrics. Loss: \$250.

## GRINNELL

PROTECTION AGAINST EVERY FIRE HAZARD





## CUSTOM-BUILT USE-ABILITY... for your motor-driven products

Exceptional performance and dependability go with useability in Lamb Electric Motors because they are:

- (1) "tailored" to the exact requirements of an application.
- (2) built of quality materials by precisionminded personnel.

Our company is equipped and organized to custom-manufacture on a volume basis; hence high quality and controlled costs go hand-in-hand.

We would like to discuss these advantages with you for your new and redesigned products.

THE LAMB ELECTRIC COMPANY . KENT, OHIO

In Canada: Lamb Electric — Division of Sangamo Company Ltd.—Leaside, Ontario

Lamb Electric

SPECIAL APPLICATION MOTORS







Swivel-mounted partable tool motor.

Turbine for canistertype vacuum cleaner.

I believe you will find, however, that Lehman will have to pay \$5,000 rather than \$500 for those 50,000 shares he holds options for (page 82).

ROBERT F. HAY

DETROIT, MICH.

· We lost a zero.

#### Casualties Grow

Dear Sir:

In your article Parts Makers Prepare for Turbine [BW—May19 '56p64] under the heading Casualties Grow (page 66) you state "Vinco Corp. said they'll close this year."

. . . Vinco will not "close this year" and it is not contemplated that Vinco will close in any other

The closing of Industrial Stamping and Manufacturing Co., a division of Vinco, which has been engaged in the manufacture of stamped and plated parts for the auto industry, was announced.

... Vinco has been making parts and assemblies for turbine powered units on an increasingly large scale for twelve years.

E. E. BUTLER

PRESIDENT VINCO CORP. DETROIT, MICH.

## Pony Gold Mine

Dear Sir:

Your nice article "There's a Gold Mine in Shetland Ponies [BW—Mar.24'56,p188] has really flooded me with inquiries regarding the Shetland Pony Industry... How to get started in the pony business, what state would I recommend as being more ideal as a location, how many acres in a certain state would be required for a specified number of ponies, etc. are a few of the questions I've been asked....

Most of the pony breeders who read the article feel that it is the best they have read pertaining to ponies. . . .

VERN BREWER

THE BREWER PONY FARM GAINESVILLE, TEX.

## **Advertising Agreement**

Dear Sir:

Your last article on the In Marketing page [BW—May19'56,p61] makes a misleading reference to "the Justice Dept.'s successful antitrust attack on the advertising business' time-honored agreements on the standard 15% commission paid



J-M Class A Asbestos Walls are movable...save space and make space ... are noncombustible, moderately priced... come in pleasing colors

New Johns-Manville Class A Movable Walls offer you advantages never before combined in an asbestos movable wall. They are modestly priced. They are noncombustible. They have a textured, stipple finish in restful colors. They reduce maintenance and relocation costs to a new low.

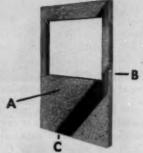
The finish of Johns-Manville Class A Movable Walls is a tough, hard film much thicker than on the usual movable partition. It is mar- and scratch-resistant . . . rejects stain and soil . . . can be easily washed and even scrubbed, if necessary. If damaged, it can be touched up inexpensively to look like new . . . and, unlike other types of fac-

tory-finished partitions, can be repainted with ordinary paint.

## Undivided responsibility for a complete job

These flush or glazed partitions are erected as well as furnished by the Johns-Manville Construction Department complete with doors, door hardware, glass and trim.

Johns-Manville Movable Walls are available in several types to meet varying budget considerations. For details, write Johns-Manville, Department BW, Box 158, New York 16, New York. In Canada, write 565 Lakeshore Road East, Port Credit, Ontario.



A Noncombustible asbestos

Generous reinforcing for added strength

C Noncombustible all-mineral insulating core

See "MEET THE PRESS" on NBC-TV, sponsored on alternate Sundays by Johns-Manville



Johns-Manville



## Sturdy Metal Packages by J. L. Clark: Precision-made for Economy!

Many familiar items in the well-equipped tackle box — split shot, line dressing and insect repellent to name only a few — require the protection of sturdy, compact containers which are quick and easy to use under all conditions. The distinctive lithographed metal containers illustrated above are precision-made by J. L. Clark for rugged outdoor service — and provide standout sales appeal as well.

Rigid precision in package manufacturing works for Clark customers in several important ways. Tight fit for protection, smooth rolled edges for safety, and smooth action closures for convenience combine to assure reliable packaging which always reflects the quality of fine products. In the customer's plant, Clark containers flow rapidly and efficiently through high speed filling lines — providing unusual economy of operation. Slowdowns due to package problems are reduced to a minimum.

If you have need for a new or improved package or lithographed metal specialty item, write us at any of the three offices listed below. Remember that our 51 years of packaging experience can be yours for the asking. J. L. Clark Manufacturing Co., Home Office and Plant, Rockford, Illinois; Liberty Division Plant and Sales, Lancaster, Pennsylvania; New York Sales Office, Chrysler Building, New York 17, New York.



to agencies by advertising media."

There was no Justice Dept. attack on agreements or any other individual arrangements between agencies and media.

The anti-trust action was entirely against alleged collective actions by this association and five media associations. Two consent decrees have now been negotiated and entered, by this Association and by A.N.P.A. And both decrees specifically exempt individual arrangements between individual agencies and media.

As you quite correctly pointed out in your earlier article on the A.A.A. decree [BW—Feb.11'56, p74] "Nothing in the decree bars any individual agency from doing just as it has always done."

FREDERIC R. GAMBLE

PRESIDENT
AMERICAN ASSN. OF ADVERTISING
AGENCIES
NEW YORK, N. Y.

## Speedup in Brazil

Dear Sir:

In your article on Brazil [BW—Apr.7'56,p103] you state: "A newly formed Brazilian firm, Troleibus Villares, has tied West German and Brazilian capital and U. S. knowhow together to produce electric trolley buses."

... We wish to advise you that our new company was established in Sao Paulo, with the aid of a partnership consisting of three other local Brazilian companies. These are: Elevadores Atlas S.A., Grassi S. A. Industria e Comercio, and Companhia Paulista de Material Eletrico, Sao Paulo. Our organization tied up with three U. S. companies, namely Westinghouse Electric International Co., Marmon-Herrington Co., Inc. of Indianapolis, and Ohio Brass Co. of Mansfield, Ohio. . . .

LUIZ DUMONT VILLARES

TROLEIBUS VILLARES S.A. SAO PAULO, BRAZIL

## Not in Washington

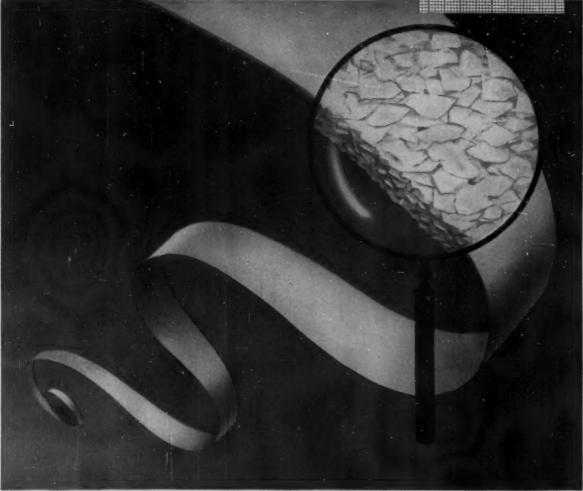
Dear Sir:

In your article A Coup for Webb & Knapp [BW—May26'56p34] you state: "The company (Webb & Knapp) has also been working for a number of years on planning the redevelopment of the blighted southwest district of Washington, (D.C.) comprising approximately 442 acres.

"This 'city' would be constructed on stilts over the freight yards of the New York Central Railroad Could chemical science find a way to improve
mica insulation for high-temperature electrical applications?

## A. NOW...MILE-LONG MICA RIBBONS FOR ELECTRICAL INSULATION





Mica is basic for high-temperature electrical insulation. But up to now, its use has been limited—because it was rigid, difficult to apply. Could chemical science make mica more flexible for easier, broader application?

Mica mat is General Electric's chemical contribution to mica insulation. Composed of myriads of tiny mica flakes—in continuous sheet form—mica mat rolls off the production line in silvery, mile-long ribbons.

Better than mica? Mica mat has far greater flexibility. It is more uniform, and completely free of voids. Less is needed for a given job, too: perhaps 25% less to insulate 10,000 volts.

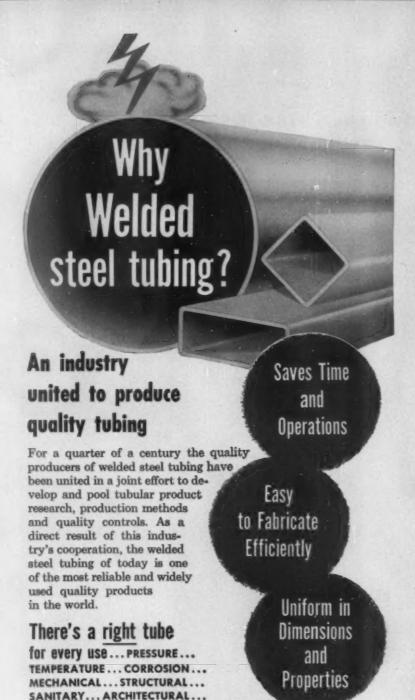
Thanks to mica mat, America is now "wrapping" its

power better, tighter, safer, lighter. It's another example of progress for all-through G-E chemical progress.

For new developments in Plastics Compounds, Silicones, Electrical Insulating Materials, Industrial Resins and Varnishes, Plastics Laminating and Molding . . . write for "G-E Chemical Products" booklet (CDG-101) to: CHEMICAL AND METALLURGICAL DIVISION, General Electric Company, Section 2500-9A, Pittsfield, Mass.

Progress Is Our Most Important Product

GENERAL ( ELECTRIC



AN ASSOCIATION OF QUALITY TUBE PRODUCERS

en	FORMED STEEL TUBE INSTITUTE (BW) 850 Hanna Building, Cleveland, Ohio Send as your idea-packed sound movie showing how to design
	with and use welded steel tubing for showing:  (please show afternote dates)
Remark .	Company
Dew C	CityZoneState We manufacture

and a small part of the mainline tracks of the Pennsylvania Railroad."

I am intrigued. All of the information I have shows that the New York Central has no tracks or property in Washington, D. C. . . .

J. J. CLUTZ

MANAGER

RESEARCH AND DEVELOPMENT
THE PENNSYLVANIA RAILROAD CO.
PHILADELPHIA, PA.

• In some copies of BUSINESS WEEK, a sentence was accidently omitted. In most copies, after the reference to the Washington project, the following sentence appeared: 'Still another plan on the Webb & Knapp drawing boards is one to build a "city" on a 40-acre L-shaped piece of property on New York City's west side."

The New York Central tracks referred to are, of course, in New York. We don't wonder Reader

Clutz was confused.

## **Pay Envelope Dictates**

Dear Sir:

You are to be congratulated on your sharpened Business Outlook [BW—May26'56,p19] in so frank an observation as: "After all, family spending not only dictates business output—it also yardsticks the adequacy of capacity. When demand surges up as it did in 1956, you get an expansion wave like to-day's."

Concur. There is more to be learned within the narrow confines of a pay envelope than in the broadest, highest, statistical chart of the mightiest corporation. Thank you for your vision.

S. F. GREENBAUM

ADVERTISING MANAGER
AMERICAN BUSINESS SYSTEMS
PHILADELPHIA, PA.

## Collective Leadership

Dear Sir:

You said "Monolithic control was so firmly entrenched at the (Chicago) Tribune under Col. McCormick, that it is difficult to think in terms of a triumvirate" [BW—May19'56,p84—When Three Bosses Fill One Vacant Chair].

Could it be that the Tribune gave up the "cult of the individual" for "collective leadership"?

GREGOR H. RIESSER

PASADENA, TEX.



Russell C. Westover, Jr., President of Ray Oil Burner Company, tells the secret of

## "How to make hay without sunshine!"

"Make hay at midnight or in a rainstorm? Sure - why not?

"Modern farmers have found a way. They cure it a few minutes after cutting—in big dehydrating plants!

"But there's one catch. Profits could disappear in a hurry if the fires go out. That's why they use Ray Oil Burners.

"And that's why Ray uses Air Express!

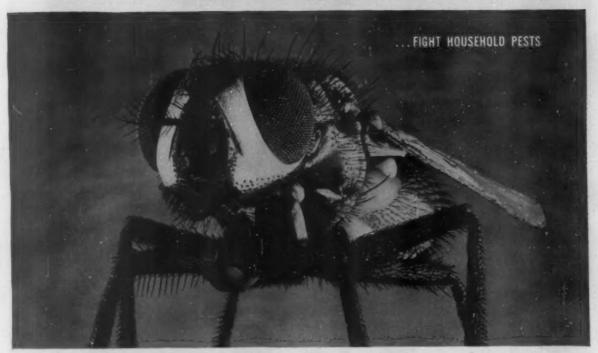
"In addition to his own stock, any Ray dealer in the country can draw on our 'super stockroom' of 40,000 different parts. It's only a few hours away by Air Express!

"It has helped build our reputation for fast service. And it saves money! 10 lbs. from San Francisco to Portland, Ore., costs \$3.78 by Air Express. That's \$1.37 less than the next lowest-priced complete, door-to-door air service."





# HOW HERCULES HELPS...





SALES BY THE BARREL—Rosco screw drivers practically sell themselves. Their colorful plastic handles, based on Hercules Hercocel® (cellulose acetate), are as durable as they are attractive. Soon to join the expanding line of Hercules plastics will be Hi-fax\*, a revolutionary new ethylene polymer with properties unmatched by any material previously available.

\*Trademark\*

FRIGHTENING CLOSE-UP; this fly can be more than a nuisance. Household insects carry disease, menacing the health of whole communities. To help control flies, mosquitoes, and similar pests, many homeowners rely on insecticides based on Hercules Thanite®. Commercial firms, municipalities, and official insect control agencies have also found that when Thanite is added to their formulations it gives immediate knockdown, plus maximum high kill.



FOR LONGER-LASTING BEAUTY at low cost, swimming pool owners everywhere depend on protective coatings based on Parlon® (chlorinated rubber). Parlon paints, such as Inertol Ramuc pool enamel which was used on this pool, won't fade or peel despite weathering and submersion. Wherever protective coatings must meet a corrosive challenge from moisture or chemicals, Parlon-based paints provide an ideal all-purpose maintenance finish.

#### HERCULES POWDER, COMPANY

968 King Street, Wilmington 99, Delaware

SYNTHETIC RESINS, CELLULOSE PRODUCTS, CHEMICAL COTTON, TERPENE CHEMICALS, ROSIN AND ROSIN DERIVATIVES, CHLORINATED PRODUCTS, OXYCHEMICALS, EXPLOSIVES, AND OTHER CHEMICAL PROCESSING MATERIALS.



CHEMICAL MATERIALS FOR INDUSTRY



## **BUSINESS OUTLOOK**

BUSINESS WEEK JUNE 16, 1956



Signs of slackening business aren't worrying consumers.

Most retail stores still are ringing up record sales. The reason becomes quite apparent when you look at the level of employment.

So many people never before had jobs at this time of year. You can't fault the figures; the worst you can say is, "It may not last."

Stores are setting their records despite autos' poor showing.

Here's the size of the handicap: Autos and automotive products have sold only \$15-billion at retail so far this year, a decline from \$15½-billion for 1955's first five months.

Yet other retail lines have made that up with \$3%-billion to spare. That brings the total for all retailers close to \$75-billion.

Include automotive sales, and retail volume for the year to date is up better than 3½%; eliminate cars and related items, and the remainder of the retailing field is nearly 6% ahead of 1955.

Retail volume in May was encouraging. The Dept. of Commerce's flash report shows the month above earlier averages.

May's sales in the nonautomotive classes were better than 7½% ahead of a year ago. Even with automotive volume included, last month's margin comes out substantially better than 4%.

Last month's retail gains were spread right across the board, excepting always stores handling autos and automotive supplies.

April declines in food, general merchandise, apparel, and lumber and hardware were reversed. Other lines continued to gain.

And it should be remembered that April's spotty showing was due more to the early Easter than to any consumer apathy.

Employment continues to run ahead of last year by a margin that really is nothing less than stunning.

Almost 651/4-million had jobs in May, the Census Bureau reports.

That's better than 2½-million ahead of the same time last year, and it's far and away the highest ever for the month.

Part of last month's rise in jobs must be credited to agriculture, which was using about a quarter-million more hands than last year.

Nevertheless, the Census Bureau's count of nonfarm workers shows a year-to-year rise of about 2¼-million; the total reached 58-million for the second time on record (the first occasion having been last Christmas when record trade brought in a horde of seasonal help).

Unemployment hangs around the 2½-million level. This is close enough to rock bottom to indicate that the initial influx of summer workers was absorbed with no trouble at all.

There is the distinct possibility, nevertheless, that unemployment will cross year-earlier levels when the June count is in.

## BUSINESS OUTLOOK (Continued)

BUSINESS WEEK JUNE 16, 1956 New claims for unemployment compensation have been running ahead of last year for more than a month. And the total actually drawing checks, trailing 1955 levels all year, finally has crossed over.

This points to a rise in the June unemployment figure—and if the rise is sizable at all, the jobless total will go above a year ago.

#### Manufacturing remains the soft spot in the employment picture.

Factory jobs have slid slowly for six consecutive months. The drop from 1955's November 17,050,000 amounts to about 400,000.

Moreover, the figure now is 600,000 below the same 1953 month even though factory output is two or three percentage points better.

Smaller factory employment, as might be expected, has been accompanied by some shortening of the work week and more or less of a standstill in the size of weekly paychecks.

- The average factory work week in May was exactly 40 hours, off from better than 41 hours at the turn of the year.
- And weekly checks ran \$1 smaller than late last year when they had set a new high above \$79.

Record outlays on factory building and commercial establishments put the squeeze on many types of material—but not all.

Slack in housing accounts for the spottiness, because this has eased supplies of certain types of lumber and plywood.

Meanwhile, structural steel is as tight as ever, while the season of peak use is sweeping up cement supplies.

Ease in cement a few weeks back was deceptive; unfavorable weather had slowed down work at building sites. But when skies smiled, storage stocks shrank rapidly. Now output has to follow demand closely.

These spot shortages are almost annual affairs in heavy construction. They persist despite continuing big additions to capacity.

Scattered price advances by several major cement producers this week pointed to some of the areas of tight supply.

Quotations are going up July 1 by 5¢ to 10¢ a barrel.

The rise might have been more general—in view of an 18¢ wage boost—had not some producers marked their product up last fall; they are willing to hold quotations, at least through the third quarter.

#### We seem to be witnessing a turn in the money market right now.

The Federal Reserve is supplying funds for June 15 taxes. But banks report loan demand isn't coming up to expectations.

Even so, the Fed apparently has no intention of turning back.

If business is going into a slide, if its money needs are slackening, then the Fed is pulled all the more in the direction of ease.

Contents copyrighted under the peneral copyright on the June 15, 1888, Issue—Business Woods, 258 W. 42nd St., New York, N. Y.

## Announcing—the Fairchild F-27 Triendship Propjet power for business on the go



## ROLLS ROYCE PROPJET POWERED • 280 MPH CRUISING • PRESSURIZED 2250 MILE RANGE • EXCELLENT SHORT FIELD PERFORMANCE • UNMATCHED ECONOMY

A flying conference room for executives on the go...a corporation personnel transport plane—the versatile Friendship stars in many roles. Airline-proven Rolls Royce Dart engines give smooth, vibration-free cruising at lowest noise levels.

Amazingly low landing speeds put small fields easily within the Friendship's reach.

More than a fast, safe company executive transport, the F-27 is a sound investment in multiplying your executive manpower. The Friendship is priced at \$540,000.\*

F-27 Friendship

\*CABIN INTERIORS, WHITE SIDEWALL TIRES AND PLUG-IN RADIO UNITS EXTRA

THE FINEST AIRCRAFT

FOR AIRLINES AND CORPORATIONS.



Illustration Courtesy of the LIGGETT & MYERS TOBACCO CO.

## 9 adhesives protect a cigarette's fine taste

Few people know how freshness - factory freshness is preserved in making, packaging and shipping their favorite cigarette.

Adhesives (1) seal cigarette paper, (2) attach cork and filter tips, (3) laminate foil and paper linings, (4) seal paper packs, (5) attach revenue stamps, (6) seal cellophane wraps, (7) form and seal cartons, (8) close shipping cases, (9) attach shipping labels.

These 9 adhesives, which are made from resin, starch, dextrine and casein bases, must fulfill many requirements. They're colorless, tasteless, nontoxic, moisture resistant, nonstaining, heat sealing, high speed, and capable of bonding a wide range of surfaces.

National is a major producer of industrial adhesives through chemistry a result of selective research and development.





Grim-faced Eisenhower just before illness pondered press conference questions. One day later, the nation was waiting for news from Walter Reed Hospital that indicated President's recovery and political pressures are running....



## A Race Against the Calendar

In the life of Dwight Eisenhower, the calendar this week became more important than the new 6-inch scar on his abdomen

The scar is healing; the operation that caused it was a success; the inflammation of the ileum that sent him to the hospital last Friday has subsided.

Washington recovered swiftly—thanks largely to smooth White House staff work—from the shock always caused by a Presidential illness. By midweek, the rapidly convalescing—but still uncomfortable—President was signing necessary papers and making necessary decisions. The seat of government has been transferred from the White House to the crowded lounge of Ward 8 in

Walter Reed Hospital, where White House staffers set up shop.

Business, too, seems to be shaking off the qualms that jolted the stock market when news of the President's illness first broke. The market rebounded quickly (page 177), and businessmen around the country are settling down to a period of wait-and-see. To most of those interviewed by BUSINESS WEEK reporters the new question about the President's health is merely one more imponderable to add to those already clouding the economic outlook.

 Little Ease Now-Any Presidential illness creates profound doubts and perplexities. The stomach-ache that awakened Eisenhower in the early morning hours a week ago developed into an illness that's as serious as the heart attack that struck him eight months ago. But last September there were almost no questions pressing for immediate decisions of the kind that only a President can make. Eisenhower could take all the time he wanted to let his heart heal, and to test his own feelings about the burdens of the Presidency. This time, the calendar must rule.

Convalescence. His doctors have released a detailed schedule, reaching six weeks ahead, of how he should progress. Any falling behind will itself be a cause for new public concern.

Politics. The Republican national convention will be held Aug. 20. This



AMBULANCE trip alerted nation.



SURGERY lights burned through night.



DOCTORS give verdict: "He can run."



MARKET tumbles; then recovers.

means Eisenhower must make a clear and firm decision, within weeks, whether to still accept the nomination.

Legislation. Congress wants to adjourn in six weeks. This means Eisenhower must fight quickly for the legislation he wants.

Foreign affairs. A personal meeting with Prime Minister Nehru of India is scheduled for July 7. This and other matters that only Eisenhower can handle, will give him no time for a leisurely convalescence.

 Quick Recovery—The only people in Washington with clear answers to any of these problems were Eisenhower's doctors. The 13-man team of Army doctors and private specialists who diagnosed his illness, performed the operation, and guided the convalescence, unanimously say there is no reason why Eisenhower should not run for President again.

 Doctors' Verdict—Within hours of the operation, they said that normal recovery would bring his dismissal from the hospital by June 23, and his resumption of full Presidential duties not later than July 21 and possibly two weeks earlier. Recovery, they assured the country, would be complete, and the chance of another flare-up very slight. In this, they had the backing of leading specialists, including Dr. Burrell B. Crohn, who first identified the illness.

There is a minority view on the recovery question: Dr. David B. Rutstein of Harvard Medical School, says recovery might stretch over three months, that there is 50-50 chance the illness will return. And, he adds: "Eisenhower's going to continue to have it for a long time because it's a chronic disease."

• Gains & Discomfort—Two days after the operation, Eisenhower walked 80 ft. around his room, sat for a time in an easy chair, signed three routine state papers, conferred with top White House aides. But he was not a comfortable man. He had one tube attached to his right arm for intravenous feeding and another running down his nose into his stomach, as a precaution against the formation of gas and nausea. Pain due to the operation persisted, though it declined each day.

• Will He Run?—Republican headquarters in Washington were deep in gloom the day Eisenhower went to the hospital, despite the official statements that "it makes no difference." Now, Republican confidence is on the upgrade. "There will be no wheel chair campaign," one party official stresses. "If Ike feels he can't conduct a vigorous campaign, he'll take himself out with a clear statement—and within a few weeks." Hardly anyone in Washington expects this to happen. Members of both parties feel Eisenhower will announce his continued willingness to accept the nomination, barring an unexpected interruption of convalescence.

But there is also a general feeling that the campaign will be affected in several

• Democrats' Targets—One way is already apparent—Democrats are launching an attack on the doctors who handled the operation and their verdict that Eisenhower is well enough to run again. Democratic Chmn. Paul Butler charged that the doctors and James Hagerty, Eisenhower's Press Secretary, had handled the illness as "propaganda."

From now on, Eisenhower's health is plainly going to be Number One issue with Democrats.

• Showdown in Congress—One of Eisenhower's first orders from his hospital room was a friendly, personal gesture to try to do what may be impossible—get Congress to restore \$1.1-billion slashed by the House from his foreign aid request. He asked staff members to telephone every senator who attended a bi-partisan meeting on the question Tuesday, and convey his thanks.

Eisenhower may yet win back the \$1.1-billion for foreign aid. One White House staffer says, "Some members of Congress who would have voted 'no,' may swing to our side now rather than yote against a sick President."

Immediately after a decision on forcign aid, the Administration had planned to push a bill approving U.S. membership in the proposed Office of Trade Cooperation. A close vote was certain with considerable risk to the Administration's prestige abroad if it should fail. With Eisenhower on the sidelines, there's doubt now if the Administration will even make the try.

• Personal Touch—Nehru's visit to this country next month was to have been highlighted by one of the personal meetings that Eisenhower puts such store by. State Department officials felt the warmth and sincerity of Eisenhower's personality might well melt some of Nehru's growing suspicion of U.S. motives in Asia. They still hope Eisenhower will be sufficiently recovered by July 7 to go through with the meeting.
• In Command—Aside from personal

meetings of this kind, no great international issues are pressing for a quick decision. The Administration had already decided to lay aside such questions as liberalizing East-West trade policies until after the election.

But one decision Eisenhower did have to make quickly was made quickly. It was the decision to disapprove a trip to Russia by all the Joint Chiefs of Staff. Said Press Secy. Hagerty: "The President certainly made the decision." It came on Monday—and it was the first indication that the President was back in command.

"We're not going to contribute to a letdown by cutting down on our capital spending before it's necessary."

"If there are any indications of a leveling off ... it's possible we might pull in our horns a little."

"With the wage scale remaining high, the expansion pressure is going to get stronger."

"We will be satisfied with idle capacity, if necessary, just to be sure we have enough later."

"Everyone is going ahead on nerve-hoping all will be well, but not the least bit sure of it."

"Our planning is too long-term to be affected by short-term influences."

## The Underpinning Stays Firm

The biggest but most carefully concealed worry of U.S. business today is this: If general business activity slides off or even simply fails to rise, will companies begin to drop or delay their ambitious capital spending programs?

If they do, the implications would be serious. Capital spending has been the great support of the economy through the current cutbacks in autos and housing; capital spending is being counted on to carry the economy through the mild inventory readjustment that many see ahead-and into several years of high prosperity beyond

Last week, BUSINESS WEEK reporters set out to discover whether there had been any weakening in companies' determination to adhere to their rising programs for spending on new plant and equipment (page 27). Reporters talked with scores of officials in companies that do much of the capital spending, with the outfits that supply their new plants and machinery, with the bankers who serve them and watch them closely.

· Holding the Line-This is the picture that emerges:

 Capital spending plans, with few exceptions, are neither changed nor scheduled to be changed, company officials say. Almost all of them insist

that their plans for 1956 are absolutely solid. But many seem more nervous and hesitant about the next few years. Within companies, there is hot dispute over whether the long-term outlook promises as much potential for growth as it appeared to when spending plans were first made. Many businessmen still think so-but they don't want to get too far out on a limb.

· In sticking to their plans, businessmen are carefully watching their competitors. Equipment suppliers report their customers aren't so eager for quick deliveries-but few report can-

cellation of orders.

Most businessmen are still talking big and bold about their long-term plans, some even bigger and bolder than at the top of the 1955 boom. One reporter, after a series of talks with industrialists, wired New York: "I get the feeling that there is the slightest bit of whistling in the dark on the part of each of them. It's nothing that can be pinned down. but I think most are worried. And I don't think they know what they're worried about. They may be about to fall victims to scare psychology

· Backing a Favorite-Many businessmen appear determined not to fall into such a trap. They are convinced that cutting capital spending might seem like a prudent step for a single company to take-but if everybody does it, the result could be disastrous. Everywhere there's a feeling that businessmen might as well bet on growth, because if they bet on decline, they will be sure to get

An overwhelming number of businessmen say they are sure the economy can take a third-quarter dip (most of them agree it's coming) and recover without any more serious decline. The capital spending boom, they say, has a long way to go; the U.S. economy is still in a long growth phase. And so they feel it's better for them to risk a few short-run mistakes through excess optimism than to miss, through excess caution, their chance to participate in coming expansion.

· Alternatives-The president of one big chemical concern put the choice

"We are not reducing our capital spending plans, regardless of the shortterm economic weather. We believe we are in a growth economy and that we will need capacity by 1960. It takes two years to get a project on stream, so it would be foolish to delay plans on the boards."

This executive is convinced that his company's past woes were due to too much timidity. "One reason why this company went down hill," he said, "was that its planning was tied to the short-term outlook. As a result, we often looked good in periods of depression, but we never had the capacity to get our share of the markets when prosperity returned. That's not going

to happen again.

"We will be satisfied with idle capacity, if necessary, just to be sure we have enough later. Stockholders will suffer to some extent in a recession because there will be continuing heavy depreciation charges on our new plant and equipment that would reduce earnings in such times. But in the long-run they will have a growth company, and

it will pay out."

· Force in the Wave-Many other businessmen hold to that same view. In fact, their determination to head "growth companies" is probably the strongest single force behind the capital spending wave, and the wave, according to all the evidence, has by no means spent itself. Most businessmen feel there's a firm base for economic growth. Rising population, rising incomes and productivity, the stimulation of large research and development programs will, they believe, make the capital spending trend immune to swings in the business cycle.

But not all businessmen share this idea. The heads of smaller companies know well that if they get into shortrun trouble, they'll likely have to cancel their capital spending programs. In times like this they begin to move toward reappraisals of their expansion

programs.

· Autos' Pains-And it's not only smaller outfits that are worried by talk of growing signs of weakness in the economy. Just now, the same pains are

afflicting the auto industry. Publicly, the auto people still insist their heavy capital spending programs haven't been changed and aren't going to be changed. But there are plenty of rumors from the big auto companies to indicate they're caught up in an intense controversy over whether to trim their

capital expansion plans.

This controversy focuses on the problem of how much growth in sales they can expect in the next five years. Some auto men hold that a five-year period of static auto sales is just beginning. The low birth rate of the Depression years means that a smaller crop of new auto customers is coming into the market; auto sales may not go above the record 1955 level for about another five years. And so, this group maintains, capital expansion plans should be cut back.

The other side in the controversy says that 1956 is just a breath-catching year and that sales will start upward again next year. Richer families and two-car families will more than make

up for the short supply of new drivers, these auto men say.

· Postponed Spending-But while the controversy rages, decisions on the auto industry's big future capital spending programs are being held up, some in-

side observers say.

The cutback in auto production is also delaying or wiping out the capital spending plans of some smaller outfits that depend on autos for their business. For instance, an Ohio battery and sparkplug manufacturer admits he is cutting back this year's capital spending program. As for 1957, he refuses to com-

· Others Caught-In a number of other industries, BUSINESS WEEK reporters got wind of similar hesitation. A middlesized Southern chemical manufacturer said: "We planned our capital spending program to stretch over the next three to five years. We tried to make the program flexible enough so that we could either spend the money right away or hold off a month or two, as it seemed best. We are going to wait a little while now, but that has nothing to do with any lack of confidence in general business conditions."

A Midwestern machinery maker who slated a hike in capacity for his electric motor plant has put the plan on the shelf until earnings in motors begin to

look better.

A toolmaker in Boston finds that all the talk about a cutback in business has set people to thinking more slowly. They're inclined, he says, to hesitate more before deciding on new investments, and they are reluctant to go ahead even after they have decided.

A South Carolina textile manufacturer is postponing a \$10-million expansion program, and blames the delay

on Japanese competition.

· Broad Picture-But such examples are still exceptions rather than rule. Most companies seem prepared to hew to their announced plans. And construction companies and equipment makers generally agree that there is no sign of an increase in cancellations of ordersjust a greater willingness to wait for the new stuff to arrive.

Companies everywhere are worried more and more about their costs. They are not eager enough for new capacity to be willing to pay fancy prices for materials or equipment that are short. They see little promise in the chance of being able to pass higher costs on to

the consumers.

The broad pattern, at this point, looks like this: There's increasing worry and some hesitation in many companies, but no immediate cutbacks of much consequence. There's a determination to hold to capital spending plans through minor dips in the economy, and a continued confidence that the economy is set for long-run growth.

## Oil Dispute

Texas Co.'s offer to buy Trinidad Oil raises howls in British Parliament. Eden postpones decision.

A big question in London this week was whether or not the government would give the green light to the sale of Trinidad Oil Co. to the Texas Co.

Texas has offered Trinidad stockholders \$179-million for the company's leaseholds on the island of Trinidad off Venezuela, a modern refinery there, an integrated Canadian company, Regent Refining (Canada) Ltd., and-best of all-a 50% share in a large marketing company in Britain.

The British company, which operates under the trademark Regent, is halfowned by California-Texas Oil Co., and apparently is Texas' chief interest in the deal. It would give the U.S. company a direct entry into Britain's rapidly ex-

panding market.

· Official Howls-The announcement in Britain of the offer-which already has been quietly cleared with the Treasury and the Governor of Trinidadtouched off howls from both Socialist and Tory members of Parliament. This week Prime Minister Eden's government announced it had postponed a decision, that it was calling Gov. Sir Edward Beetham of Trinidad home for consultation. The odds favor some kind of compromise that would guarantee Britain's interests in the area.

The economic arguments against the deal come from both Right and Left: Trinidad's oil, though a small part of world production, is considered some-thing of a hedge for Britain against trouble in the Middle East fields. The shift of control from London to New York might cost British petroleum equipment manufacturers some orders

in Trinidad's expansion.

· Political Arguments-The political arguments are louder. Defenders of the empire in Britain believe that penetration by a U.S. company, giving it domination over Trinidad's chief source of revenue, would be disastrous for British influence in the Caribbean Federation now being formed (BW-Jan.21'56, p118). Opponents on the Left also say a U.S. company might bring tension to Trinidad's complicated racial setup. East Indians, both Moslem and Hindu, Chinese, Latin Americans, and Negroes now live there together with little discrimination.

Trinidad Oil's chief, Simon Vos, says the company has no choice but to accept the offer. Vos says the company just hasn't the finances to keep in the

race with the big oil companies.

## CAPITAL SPENDING:

Billions of Dollars

Manufacturing Durable goods Primary iron o Primary nonfe

Mining Railroad Transportation o Public utilities . . Communication Commercial and

PENDING:		5 172	100				3 10 5 5 1	
SEC-Commerce Finds it Rising, Quarter by Quarter								
*U. S. Business Quarterly, 1955-56, Seasonally Adjusted at Annual Rates, Data: SEC-Commerce Dept. 20			Total Ex for New	penditur Plants a	es nd Equipr	ment*		
0	J F M	A -M J	JAS	OND	J F M	A M J	JAS	
And Here's How								
It Breaks Down	+	19.	55	-	+	- 1956 -		
by Industry	Millions of	Dollars	No Charles					
	Jan Mar.	Apr June	July- Sept.	Oct Dec.	Jan Mar.	Apr June	July- Sept.	
lanufacturing	2,249	2,795	2,899	3,499	2,958	3,979	4,046	
Durable goods industries	1,063	1,278	1,378	1,718	1,462	2,036	2,127	
Primary iron and steel	154	211	214	283	219	328	357	
Primary nonferrous metals	41	45	58	71	69	102	119	
Electrical machinery & equipment  Machinery except electrical	158	102	108	138	104 227	147	146	
Motor vehicles & equipment	224	256	295	354	341	280 498	275 531	
Transportation equipment, excluding							331	
motor vehicles	48	65	72	88	77	121	140	
Stone, clay and glass products	88	106	121	183	132	197	213	
Other durable goods	260	306	304	344	293	363	346	
Nondurable goods industries	1,186	1,517	1,521	1,781	1,496	1,943	1,919	
Food and beverages	170	196	171	182	178	204	188	
Paper & allied products	77 92	120	83 142	115	108 155	113	95 219	
Chemicals & allied products	231	230	239	317	283	369	382	
Petroleum & coal products	490	730	741	836	627	879	884	
Rubber products	30	36	39	45	40	43	47	
Other nondurable goods	96	113	106	122	105	123	104	
lining	186	235	248	288	262	292	312	
ailroad	179	217	215	312	297	368	356	
ransportation other than rail	359	420	401	421	396	436	458	
ublic utilities	845	1,052	1,174	1,238	936	1,360	1,431	
ommunication	1,608	1,819	2,021	2,041	2,613	2,706	2,627	
ommercial und office	1,000	1,019	2,021	2,041	100000000000000000000000000000000000000	G - 2 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6	THE PARTY OF THE P	

## Fresh Forecast of a Busy Future

A new report made jointly by the Securities & Exchange Commission and the Commerce Dept. this week confirmed the finding of the latest McGraw-Hill survey of capital spending (BW-May19'56,p23). Both surveys show plainly that business is still raising the amount it plans to spend on new plant and equipment.

SEC and the Commerce Dept. find that business is aiming to spend at an annual rate of \$34.8-billion in the second quarter of the year, at a rate of \$36.7-billion in the third quarter. Both figures are records, and both show no hint of a stalling or reversal in the steady climb of business' capital spending that started when 1955 began.

· Record Forecasts-If business carries out the plans it has scheduled for July, August, and September this year, capital spending will reach a rate \$7-billiona-year higher than in the same period last year, \$4-billion a year more than it

was in the first quarter of this year. Total capital spending in the first three quarters of this year, says the SEC-Commerce report, will be 26% higher than in the same period of 1955. The latest McGraw-Hill survey found capital spending through the whole of 1956 would be 30% greater than it was during the whole of 1955. These two findings both reflect surveys made in April and May.

In February, SEC and Commerce

made a preliminary survey and came up with an estimate that capital spending would hit \$34.9-billion for the whole year (BW-Mar.7'56,p30). It certainly seems now that that estimate was on the low side. If capital spending were to average \$34.9-billion this year, it would have to make a sharp dip-by \$1.5-billion-between the third and fourth quarters of the year.

• Force for Gains—There's no evidence that business is planning for any such dip. On the contrary, the steadily rising trend appears likely to keep going. And the strongest force for a continued rise lies in the fact that because materials and equipment were short, business had to defer a slice of the spending it scheduled for the first part of the year. All signs are that this deferred spending will be included in business' plans for the second half of the year.

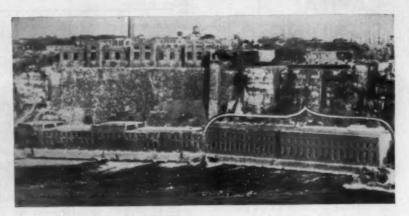
• Basis for Difference—If the current uptrend keeps going, SEC-Commerce estimates that business' capital spending should hit \$35.7-billion for the full year. McGraw-Hill estimated that the year's total would be \$39-billion. Most of the divergence between these two findings results from these differences in scope and definition:

 McGraw-Hill bases its survey largely on the plans of large companies, includes only a smattering of small and middle-sized companies. The government survey covers a larger proportion of smaller companies.

• The two surveys classify some industries differently. Most importantly, this means that about \$1.5-billion of the petroleum industry's annual spending, which is included in the McGraw-Hill total, is not in the SEC-Commerce total. McGraw-Hill considers it more in line with the oil industry's practice to consider as part of capital spending this extra \$1.5-billion, which includes expenditures for land and leases.

Even when you drop that \$1.5-billion from the McGraw-Hill survey's total figure you get a capital spending estimate for 1956 of \$37.5-billion. This is still about 5% higher than SEC-Commerce's new estimate. And that gap is accounted for primarily by the McGraw-Hill survey's heavier concentration on the plans of larger companies, whose capital spending programs this year are less likely to be affected by shortages of money, materials, or skilled manpower.

• Cheering Glimpse—Since the most recent McGraw-Hill and SEC-Commerce surveys were taken at the same time, it's not surprising that their results are consonant. And since both surveys were taken in April and May, they give a cheering glimpse into the future—for if a change in business' spending plans is in the works, it certainly wasn't perceptible as recently as last month.







MULTIMILLION DOLLAR ROCKFALL that buried Niagara Mohawk's Schoellkopf station (top) under debris (bottom) means loss of company's cheapest source and a . . .

## **Problem for Niagara Power**

The 50,000 tons of rock that peeled off the side of the Niagara River canyon overhanging the Niagara Mohawk Power Corp.'s Schoellkopf station last week did a lot more than knock two-thirds of the station (bracketed in top picture) into a mass of debris.

It cut to a trickle the generation of

hydroelectric power on the U.S. side of Niagara Falls, tore some holes in the company's books, and gave a new turn to the controversy over adding to the power output of the falls area.

 Damage—At midweek, generators were still under 12 feet of white water (lower picture) that spewed out of broken feed pipes from the intake canal behind the bluff. Engineers had to build a cofferdam to stem the flow. Niagara Mohawk values the station at \$20-million, but estimates of replacement costs run to \$100-million.

It's still hard to tell what's what, but it's likely that destruction is extensive enough to require a complete rebuilding job. And Niagara Mohawk doesn't even know yet whether it will be possible to

rebuild on the same site.

· Supply-The city of Niagara Falls, which has one of the country's largest concentrations of electrometallurgical and electrochemical plants, suffered only a temporary power shortage. Niagara Mohawk shunted in power from its own steam generating facilities and from neighboring utilities in New York, other nearby states, and Canada.

The power loss itself isn't disastrous; the Schoellkopf plant represented only about 8% of NMP's peak generating capacity, its spokesmen say. Its other plants are supplying about half the lost capacity, and it buys the rest.

But, here's the rub. Schoellkopf produced the cheapest power in the network, and NMP says it will take a

loss on purchased power.

· Future-Even if the site is suitable for rebuilding, it will take 18 months to two years to get the station back in commission. And the accident is bound to affect the already controversial program for further power development.

The Senate has passed a bill permitting the New York State Power Authority to spend \$400-million on new generating facilities, but the House has not acted. A group of five power companies, including Niagara Mohawk, has been plumping for a private program.

The project has been the center of a private vs. public power fight since a U.S.-Canadian treaty in 1950 permitted diversion from the falls for power gen-eration of more than double the pre-viously allowed maximum of water. The treaty stipulated that any program must have Congressional approval.

· Accident Impact-The accident put a new twist on the argument, if nothing more. Niagara Mohawk's federal license has only 15 years to run before recapture is possible. Advocates of development by New York State saw the accident turning on a green light. They argued that, with the 15-year term in mind, the huge replacement cost would make rebuilding in private hands pro-hibitive. Sen. Herbert H. Lehman (D-N. Y.) called for immediate House passage of his bill for state development.

Others, however, saw a challenge to private power supporters. And if Niagara Mohawk should rebuild at heavy expense, they asked whether the large unamortized charge remaining after 15 years would not make the government

less anxious to take over.

## Credit Rift Is Patched Up

Humphrey and Martin fail to criticize one another at hearing conducted by Rep. Patman on disagreement between Fed and Administration on discount rate hike.

The well publicized dispute between the Federal Reserve System and the Administration over the Fed's restrictive credit policy was made to appear this week as a mild difference of opinion that has now been patched up.

This was the upshot of testimony by the two principals in the dispute, Treasury Secy. George M. Humphrey and William McC. Martin, the Fed's chairman. They appeared before Rep. Wright Patman (D-Tex.), a critic of both the Administration and the Fed, who sat as a one-man subcommittee of Congress' Joint Economic Committee.

· Sweetness and Light-Neither Humphrey nor Martin did more than confirm the news that the Administration did not agree with the Fed when it raised the discount rate for the fifth time in 12 months (BW-Apr.28'56,p25). According to Humphrey, the Administration opposed the Fed's action because the economy appeared to be balanced between inflation and deflation and it believed there was no need for further action. But he seemed to be approving the Fed's move when he added that the policy of restraint was "very whole-

For his part, Martin revealed that other Administration officials had also been against the Fed's action. He named Arthur Burns, chairman of the Council of Economic Advisers, Randolph Burgess, undersecretary of the Treasury, and Gabriel S. Hague, one of the President's economic advisers. But Martin also pointed out that he had the full support of the other members of the Federal Reserve Board and the backing of most top officials in the Fed's 12 regional banks.

· Boomerang-Patman made no attempt to conduct a full-fledged examination of the dispute between the Administration and the Fed. Instead, he used the hearings to aid his habitual line that tight money was causing distress to farmers, small business, and the lower

economic groups. Humphrey hit back by attacking Patman's position as "absurd" and "ridiculous." He pointed out that Patman has been wanting lower interest rates for the past three years, when the economy was enjoying great prosperity. Martin also scored Patman's views, insisted that credit restraint would provide price stability that was essential to small business and consumers.

There are a number of reasons for Patman's failure to get to the bottom of

the dispute. For one thing, the Fed already has eased its policy to make credit readily available to meet demand (BW -May26'56,p25). For another, he received no support from other Democratic congressmen who were expected to use the dispute as a political cam-

· Notable Absence-In fact, Patman opened the hearings by declaring that Sen. Paul Douglas (D-III.) would attend. But Douglas, who considers himself as the guardian of Fed independence from the Administration, failed to show up. His absence, according to Fed officials proved that the Fed had maintained its independence despite Administration pressure, so that Douglas felt no need to intervene.

It was also considered significant that Patman did not call other Administration officials or private citizens to testify. Observers felt that he had had second thoughts about the dispute, and was just going through the motions.

• Praise for Martin-Certainly Patman

turned up nothing the Democrats could exploit. Humphrey called Martin the "best qualified man in America" for his job, stated that even if the economy took a turn for the worse, he would never blame Martin. Humphrev got the only real laugh of the hearing when he added that "I would like to blame the Democrats if I could find a way to do so."

Humphrey's only real criticism of the Fed came when he declared that its restrictive credit policy was partially responsible for the decline in auto sales. But he smoothed over this point by commenting that the economy was in good shape and needed a period of

nesitation.

· Future Policy-Martin refused to be drawn into any assessment of the current situation, but said that as he saw it, there was no longer a feud between the Fed and the Treasury. He also spoke out in favor of using the discount rate and open market operations to restrict credit rather than raising the reserve requirements that member banks must keep with the Fed. Martin felt that reserve requirements "were already too high," even though the Fed had lowered them twice during the "mild recession of 1953-54."

This seemed to indicate that if a recession did develop, Fed might reduce reserve requirements to ease credit. But neither Martin nor Humphrey seem to fear such a decline.



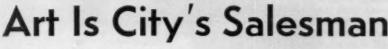




## In Boston,

Culture is old Boston's proudest boast, but the Athens of New England has its Yankee practicality, too. So it's making its art do duty as a selling point—to attract the scientists and others it needs to run its industries,





Some cities boast of their climate in trying to attract newcomers. Others emphasize location or spaciousness. Old Boston makes its sales pitch with culture.

This year it's putting more into the pitch than ever. The city is now in the middle of its fifth annual Boston Arts Festival, where 750,000 are expected to see—for free—paintings, sculpture, architectural exhibits, drama, opera, dance, and music. The pictures give you the

flavor of the displays by New England amateur and professional artists.

Behind these exhibits is a two-fold

• Thousands of suburbanites are pulled downtown, reminded that the core of the city provides something the suburbs lack. That helps counteract the competition the downtown stores are feeling from the fast-growing suburban shopping centers.

· Boston wants to impress out-



LURES for visitors at Boston Arts Festival include pottery making demonstration . . .



. . . guided tour of paintings by Richard McLanathan, of Museum of Fine Arts . . .



. . . and Broadway cast in free performance of Menotti opera, Saint of Bleecker Street.

siders with the cultural attractiveness of living in New England. Almost 300,000 people from outside the Boston area are expected at the festival. Boston is aiming especially, though, at one particular group. The electrical industry recently passed textiles as the largest employer in Massachusetts, and the state's need for engineers and scientists is far from satisfied. Boston thinks these people can be sold on culture.

• All-Out—To show it means business, the community is giving the festival its whole support.

From 1952's \$20,000, the festival budget has swelled to \$100,000 this year. The city itself contributes \$15,000, business gives \$20,000; the rest comes from the public, from advertisements in the festival catalogue, from chair rentals. The corporate fund raisers include men like George Alpert of the New Haven RR, hotelman

Paul Somnabend, and Harold E. Hodgkinson of Filene's department store.

On top of the cash, the citizens throw in some services. Filene's runs ads touting the festival. Construction firms donate materials for a \$25,000 stage, saving architect Nelson Aldrich's committee \$20,000. Professional artists work for a minimum fee. Architects and carpenters donate their talents. Musicians play free.

• What'll You Have?—For all this, visitors to the 16-day festival at the Boston Public Garden get this line-up of attractions: paintings, sculpture, and graphic arts displays, prizewinning New England architectural projects, over 100 products of crafts from weaving to pottery, water colors from non-New Englanders, performances of Gian Carlo Menotti's Saint of Bleecker Street, folk dancing, Robert E. Sherwood's Abe Lincoln in Illinois, ballet by members

of the New York City Company, poetry read by Archibald MacLeish, and jazz.
• Prototype—While the cultural festival undoubtedly will be enlarged even further in the future, Bostonians don't expect anything like the doings of decades ago that first showed Boston's taste for such affairs—the 1784 festival to commemorate the death 25 years earlier of composer George Frederick Handel, of the 1872 jubilee, which celebrated the Civil War's end with a chorus of 20,000 and a 2,000-piece orchestra led by Johann Strauss.

Bostonians are confident they are on the right track in promotions, partly because some 15 other cities have made inquiries about how it's done. Among those that have begun or plan similar ventures are Atlanta, St. Paul, Ballar more, Charleston, W. Va., Springfield, Mass., and Newark, as well as a couple overseas, Hong Kong and Haifa, Israel.

## **Atomic Perils for the Future**

The National Academy of Sciences this week released its long-awaited report on the biological and other effects of atomic radiation. Far from saying, as most people expected, that the Atomic Energy Commission has been too tough in its safety regulations, the National Academy calls for a closer watch over people in some situations.

The danger, says the Academy's summary report, is not so much to the present generation as to future generations: Exposure to radioactivity that is harmless to today's life can cause harmful mutations in tomorrow's life. The reproductive system is the most vulnerable part of the body, and the effect of radiation is cumulative through the childbearing years.

• More to Come—This week's release is only a summary of a massive study by more than 100 distinguished scientists, working for more than a year with funds from the Rockefeller Foundation Full committee reports will come later, detailing atomic radiation effects from the standpoint of six fields: pathology, genetics, meteorology, oceanography and fisheries, agriculture and food supplies, and disposal of radioactive wastes.

These studies by committees are continuing, though the most intensive work is believed to have been done.

• Effect on Heredity—The summary report goes into most detail in the field of genetics, where the committee is headed by Dr. Warren Weaver, vice-president for the natural and medical sciences of the Rockefeller Foundation. Here the findings call for reappraisal not only of AEC and industry practices but also those of the medical profession.

It comes down to this: It takes some



400 to 600 roentgens (the units that measure the strength of radiation) to kill at one shot and a cumulative lifetime dose of 1,000 roentgens to shorten life by five years. But exposure of the reproductive glands of the population as a whole to much more than 10 roentgens apiece from conception to age 30 will produce changes in genes that can impair children born to future generations. (Half or more of all children are conceived of parents under 30.)

Most individuals can safely receive an accumulated 50 roentgens in the reproductive system by age 30, says the Academy committee, and another 50 roentgens between the ages of 30 and 40. The Academy regards these as "reasonable" radiation limits. But such dosages applied to an entire population would be catastrophic.

• Effect on Today-The catch is that people already amass radiation exposure

from other sources, regardless of atomic projects. In the U.S., for example, by age 30 the average person accumulates between 3 and 4 roentgens from medical or dental X-rays. That's an average. It's much higher for many people—a typical dental or chest X-ray accounts for 5 roentgens of which some percentage reaches the reproductive glands, and an abdominal X-ray may run still higher.

In addition to medically prescribed X-rays, the average person also accumulates about 4.3 roentgens from cosmic rays that filter down through the atmosphere and from other natural sources, such as radium. People living at higher altitudes, where the atmosphere is thinner, may get as high as 5.5 roentgens from cosmic rays and other natural sources.

Thus, even before atomic energy is figured in as a new factor, the average person has used up 7.3 to 9.5 of his 10 roentgens by the time he is 30.

The additional radiation due to fallout from atomic explosions is not yet large—if test explosions are continued over the next 30 years at the current rate, they would give only an additional 0.1 roentgens to the average U.S. resident.

But radiation from atomic power plants and disposal of atomic wastes can be expected to increase. Full-scale industrialization of atomic energy as it is now contemplated could mean a 1,000-fold increase in fissionable products within the next 50 or 60 years.

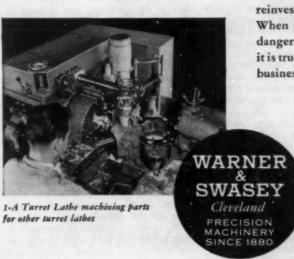
Need a Second Look—This probability suggests to the Academy the need for an immediate re-evaluation of present and future practices in the light of genetics. Because the cumula-

# Did you just throw away your son's future job?

It takes an average of \$12,000 in savings to provide a job in America today—perhaps the very job your son will want some day. The more money the tax collector takes (from companies and individuals) the less savings there can be to invest in machinery and buildings necessary for tomorrow's job.

The dollars you paid out last month in taxes might well be the very dollars that, saved and invested, would have created your son's job a few years from now.

The best way for American business to grow is by reinvesting profits, by individuals and corporations. When taxes take too much of those profits we are dangerously throttling America's growth. That's why it is true that what is done with our taxes is everybody's business, not Washington's alone.



tive dosages of radiation already mount dangerously close to the "reasonable" limit, Academy scientists warn of the urgent need for a national system of records for each person's exposure.

It also imposes on medical men a responsibility for keeping patients' exposure to X-rays as low as possible and for shielding them carefully to minimize the possibility of danger to the

reproductive system.

Immediate Perils—Pathological damage to the present generation is a less pressing danger, according to a committee headed by Dr. Shields Warren, professor of pathology at the Harvard Medical School. The possibility of a lethal or life-shortening dose of radiation is remote under present conditions.

If the radiation level is kept anywhere near the strict limits set for genetic safety, today's population of the world'

is in no danger.

The only considerable hazard is the possibility of widespread contamination by strontium-90, a nuclear product that is long-lived (with a half-life of 10,000 days) and that affects bone tissues.

The Academy does not minimize the effects of fall-out from tests of nuclear weapons, and it concedes that accidents will happen, as in the contamination of the Japanese fishing boat Fortunate Dragon in 1954. But it does not go along with the handful of scientists who have been clamoring for curtailment of tests on the ground that they are scattering dangerous amounts of radioactivity over the world.

• Atom Plant Workers—The report upholds present AEC safety standards, except that the genetics committee recommends drastic reduction of the exposure allowed for younger workers. AEC has allowed a maximum of 0.3 roentgens a week for each worker; the Academy wants this limit cut sharply for workers up to age 30 and cut by about one-third for those between 30

and 40 years of age.

Atom Plant Design—Thus, industry seems doomed to disappointment in its hope that AEC would ease up on its requirements for bulky and expensive shielding of reactors. Moreover, although the Academy report discounts the likelihood of accidents, it points out that a reactor core might "overheat so severely as to vaporize its material completely..., spread disastrous quantities of radioactivity over thousands of square miles."

Therefore, until reactors can be designed to remove this hazard, they should be sealed in structures strong enough to contain the expanding vapors. This evidently means more such costly and awkward structures as that at Duquesne Light Co.'s plant under construction at Shippingsport, Pa.

There, the reactor core is sealed in a steel container, and the reactor building is as leakproof as the builders can make it. Finally, the entire reactor portion of the plant is sunk underground.

Next to a possible vaporizing of a reactor core, the Academy scientists see fueling as the most hazardous part of the reactor operation. Handling and transportation of radioactive materials are a problem, too.

• Disposing of Wastes-AEC is already spending millions of dollars a year on

the problem of disposing of the highly radioactive byproduct of fission. The "hottest" are sealed in tanks and stored; less radioactive wastes are buried in isolated "graveyards."

The British have been dumping some fission products at sea, but only

those of low radioactivity.

The Academy's oceanography committee frowns even on this practice pending an international study of ocean currents and possible effect on marine life.

## Monopoly Takes On New Meaning

Supreme Court's du Pont decision could eliminate monopoly tag in many industries.

The Supreme Court this week wrote a new meaning for the concept of monopoly—a meaning that is likely to prevent government antitrusters from demonstrating the existence of monopoly in many markets that would otherwise be vulnerable to them.

Essentially the court has held that the market for any particular product is bigger—and therefore harder to monopolize—than the Justice Dept. has previously considered. The market for any product, the court now holds, "is composed of products that have reasonable interchangeability for the purposes for which they are produced—price, use,

and qualities considered.

• Du Pont Decision—This twist in the court's thinking came in the government's antitrust case against du Pont. The question to be decided was whether production of 75% of all cellophane sold in the U.S. between 1923 and 1947 gave the company a monopoly in that field. In a 4-3 decision, the court said the answer was "no." The majority reasoned that du Pont's share of the cellophane market is only 17% or less of the total market for flexible wrappings.

This broad market also includes glassine, greaseproof and vegetable parchment papers, waxed papers, aluminum foil, cellulose acetate, pliofilm, and

other films.

The ruling upheld a federal district court decision in du Pont's favor in 1953.

Among the dissenters was Chief Justice Warren. He said the high court's decision might "virtually emasculate" the antitrust laws.

 Practical Difficulties—The decision raises some sticky problems for the officials charged with enforcing the antitrust laws. They wonder, for example, whether it even can be said again that a company monopolizes aluminum or wrapping materials or building materials since each competes with other products for a variety of uses?

The majority of the court was well aware of this difficulty. In fact, Justice Reed in his opinion suggested that each case of this kind is different.

The court ruling in no way alters early decisions that, under the Sherman Act, control of price or competition establishes the existence of monopoly power. Reed admitted that if cellophane were the "market" to be considered, du Pont "does have a monop-

oly power in that market."

• New Yardstick—But—and this is the crux of the matter—Reed held that determination of the revelant market for commodities under the antitrust laws depends on how different they are in character or use and how far buyers will go to substitute one commodity for another. Where there are market alternatives that buyers readily use illegal monopoly does not exist merely because the product said to be monopolized differs from others.

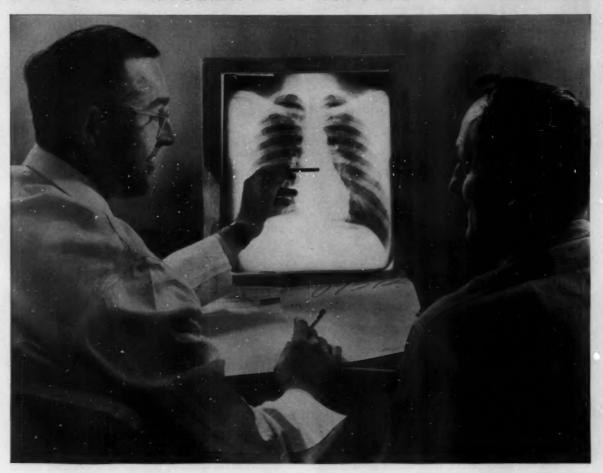
• Strong Dissent—In the dissenting opinion, Warren agreed with government antitrusters that the market for other flexible wrapping materials is separate and distinct from the market for cellophane, that competition from substitute materials was not strong enough to be taken into account.

The Chief Justice believes buyer conduct shows cellophane is distinctive. He wrote: "We cannot believe that buyers, practical businessmen, would have bought cellophane in increasing amounts over a quarter of a century if close substitutes were available at from one-seventh to one-half cellophane's price."

Warren voiced the antitrusters feeling by declaring that the du Pont case shows that the formula of "reasonable interchangeability" is "perfectly compatible with a fully monopolized econ-

omy."

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## In Business

#### Coal Producers, UMW, Railroads Pool \$50-Million To Get Ships and Thus Spur Exports

The U.S. coal industry, the United Mine Workers, and coal-hauling railroads have ganged together to pro-

mote the export of coal (page 157).

A \$50-million corporation—American Coal Shipping, Inc.—has been formed, with the immediate object of acquiring its own ships and placing them in the coal export trade. Charter members include the UMW, the Chesapeake & Ohio Ry., the Norfolk & Western Ry., and 11 coal producers including the huge Pittsburgh Consolidation Coal Co.

Walter J. Touhy, C&O president, told the National Coal Assn. convention in Washington that "it is becoming evident day by day that the foreign demand for American coal is no longer on a spot basis, but perma-

nent and expanding."

#### New \$250-Million Redevelopment Plan Launched for Old Philadelphia

This week, Philadelphia launched a second major downtown redevelopment to match the Penn Center that has been pushed west of Broad Street by the Pennsylvania RR (BW-Sep.25'54,p62).

The new project, stretching from the east side of Broad

all the way to the Delaware River, calls for:

Residential development from Broad to Washing-

ton Square, near Independence Hall.

 Restoration of the old upper-class neighborhood called Society Hill and the Dock Street area from which the food market will be moved.

Light industrial development to the north, along the

Reading RR tracks.

Albert M. Greenfield, chairman of the City Planning Commission and real estate owner (BW-Sep.25'54,p72) is expected to play a considerable part in the \$250-million project. He has proposed that a limited dividend corporation be set up to help finance the plan, to which the federal, state, and city governments will contribute.

#### Canco, Baffled by Steel Price Boosts, Plans to Process Its Own Plate

American Can Co. announced this week that, since it can't head off steel industry boosts in the price of tin plate and black plate, it will build a \$27-million plant

to process its own supplies.

Canco will buy steel from its old sources, but in huge pre-processing coils. Then it will do its own processing, thus avoiding the profit that the steel industry tacked onto the cost of doing the same chore. Expansion plans: Capital spending by Standard Oil of California will hit \$350-million this year . . . Union Carbide & Carbon will spend millions to increase its uranium processing facilities near Rifle, Colo.

. . . And corporate switches: The \$200-million purchase of the gas and oil properties of Houston Oil Co. has been completed by Atlantic Refining Co. . . . General Precision Equipment Corp. plans to buy Graflex, Inc., Rochester camera maker.

#### CBS Head Angrily Denies Bricker Charges of Monopoly

Frank Stanton, president of CBS Television, this week hotly denied the monopoly charges made against the networks by Sen. John D. Bricker (BW—May5'56,p32). In support, the CBS head submitted a 200-page statement and four fat reports to the Senate Interstate Commerce Committee, which is holding hearings on network control over programing and independent stations.

Stanton told the senators that CBS lawyers assured him that the company's operations "do not in any respect . . . violate the antitrust laws," and that "the CBS television network does not constitute a monopoly by

any meaningful definitions."

In sharp exchanges with senators of both political parties, Stanton defended network control over prime evening hours (option time) and over independent stations (must buy clauses).

#### **Business Briefs**

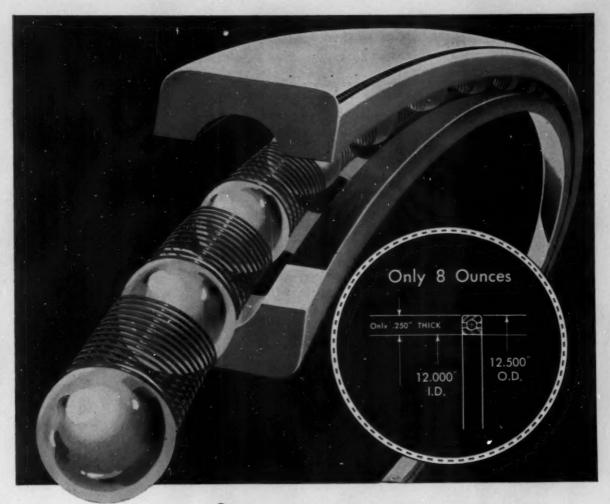
Construction spending in May, at \$3.7-billion, almost exactly matched the year-ago month. But it took record factory and commercial building to offset an 8% lag in housing.

The Supreme Court barred new oil drilling and leasing activity in the Louisiana tidelands until it rules on where the state and federal boundary falls. Louisiana claims—as Texas got—a boundary 10 miles out; the U.S. says it's three miles.

The trademark "Sohio" may not be used by Standard Oil Co. (Ohio) in the 15-state marketing area of Standard of Indiana. That's the ruling of a U.S. court in Wyoming, after a 35-day trial.

Fast tax write-offs on \$542.8-million of freight cars and locomotives have been granted to about 100 railroads by the Office of Defense Mobilization. About 85% of the 70,600 freight cars and 85 locomotives will be amortized in five years; the normal period for railroad equipment is 30 years.

Economic research by individuals, rather than by teams, gets a \$2.7-million-plus boost from the Ford Foundation. The money goes to California, Chicago, Columbia, Harvard, Yale, and the Brookings Institution—which will parcel out funds to smaller colleges.



# Reali-Slim...by Kaydon world's thinnest radial ball bearing

HERE'S a typical example of Kaydon's Reali-Slim unique radial ball bearing that's finding wide application in practically every industry. Reali-Slim are the world's finest thin-section bearings and proportionately are thinner than a wedding ring. The bearing illustrated here is 12.000" I.D., 12.500" O.D., .250" thick - weighs less than 8 ounces. Designed for minimum weight and space limitations, it has a static load capacity of 5,520 lbs. and 894 lbs. at 100 rpm.

If you're looking for Reali-Slim, lightweight, radial ball or roller bearings, look at Kaydon's Reali-Slim line. Besides hundreds of standard Reali-Slim designs, there's a wide

variety of special races, seals and separators to meet special bearing problems. What's more Kaydon is able to produce these Reali-Slim, high-precision bearings because Kaydon specializes in the unusual. In addition, Kaydon bearing engineers are prepared to give you valuable help with technical bearing application problems.

For complete data on Reali-Slim bearings for standard or special applications, ask for engineering Catalog 54 RS-2.

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## WASHINGTON OUTLOOK

WASHINGTON BUREAU JUNE 16, 1956



Democratic hopes of a November victory will be on the rise until and unless Pres. Eisenhower shows an outward picture of complete recovery.

Party leaders in Washington are being cautiously optimistic. They figure the odds are still against them—that Eisenhower will stay in the race (page 23). But even so, they expect to gain some favor and votes with the argument that Eisenhower no longer can guarantee a full day's work in the White House for four more years. More realistically, they feel that there is now a greater chance that another illness, or a slow recovery, would prompt him to bow out.

The health issue, obviously, will be hammered hard. Democrats assert that if it's all right for the doctors to predict so soon after surgery that the President will be physically able to run, then the opposition can question equally the prognosis that he will be able to serve fully.

There is no talk yet of the President withdrawing. Republicans are indeed emphasizing that Eisenhower is in command by detailing his actions even while hospitalized. The Republican gloom of last Friday is lifting, though a lot of Republicans say privately that they won't be completely reassured until Eisenhower is able to tell the country that he is able and willing to go ahead with the race.

Washington expects Eisenhower to speak soon—within weeks. The feeling is that it is part of his conscience to be bluntly frank about himself. And Republican politicians are convinced that this is good politics—demonstrated by the favorable reaction from the country to full disclosure of his heart attack. They want a quick decision to thwart efforts to build an atmosphere of doubt that would benefit the Democrats.

His decision is expected well before the GOP convention in August. Republican strategists for both the Presidential and Congressional races will urge an early announcement so that new candidates and tactics can be developed if Eisenhower does step down. Their betting is that he will run.

Will Eisenhower be able to help win Republican control of Congress? That is worrying some Republican leaders. Few doubt that Eisenhower could win for himself with only a few major appearances and speeches. But they agree his help will be needed to pull majorities in the House and Senate. He had volunteered to do just that a week before his attack. Well-placed Republican strategists feel he will go through with the job, or not run at all.

Republicans need to gain two Senate and 15 House seats for control. A sweep of the Presidential race probably would pull in majorities, though slight, just as happened in 1952. But GOP strategists believe that in any kind of close race, Eisenhower's personal help will be needed in 40 or so Congressional districts, and in 3 or 4 Senate races.

#### Here is where the GOP is facing its stiffest Senate contests:

Ohio—Sen. George Bender is challenged by a tremendous vote getter, Gov. Frank Lausche. But Eisenhower's personal help could tip the balance; organized labor is dead set against Lausche, and Republicans who have

#### WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU JUNE 16, 1956 favored him (in the past), even though he's a Democrat, are being urged to vote straight this time.

Pennsylvania—Gov. James H. Duff is not so strong as he was; he is slipping in organization strength, and recently lost out in a fight to name the state GOP chairman. He is opposed by former Mayor Joseph Clark, of Philadelphia. It was Clark who was instrumental in breaking up Republican control of Philadelphia and who, in 1952, delivered a big majority to Stevenson.

Colorado—The failing health of Sen. Eugene Millikin has Republicans pessimistic. Millikin's political strength is still sound. If he can make a campaign his chances are still good. But he has been confined to a wheel chair most of this year. His opponent: former Agriculture Secy. Charles Brannan.

Maryland—Sen. John Marshall Butler barely won in 1950 over Democratic veteran Millard Tydings. They are matched again, and odds favor Tydings, unless Eisenhower can help.

Republican chances of unseating Democrats are good in several states—if Eisenhower is on the stump.

Washington—The GOP has Gov. Arthur Langlie against veteran Democrat Warren Magnuson. Langlie is a strong Eisenhower man.

Oregon—Interior Secy. Douglas McKay resigned to take on Democrat Wayne Morse, former Republican who broke away after Eisenhower came in. Public power will be the issue, and Eisenhower's personal influence will be needed.

Kentucky—Assistant Secy. of State Thruston Morton resigned to oppose Democratic whip, Earle Clements. A factional split in the Democratic Party could be crucial, unless Clements and Gov. Chandler patch it up.

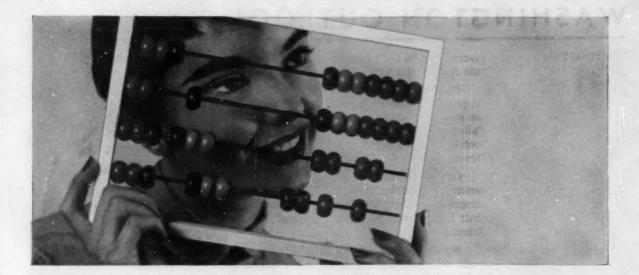
West Virginia—Another Democratic schism here could help ex-Sen. Chapman Revercomb slip by. Outgoing Gov. Marland is running on the Democratic ticket. He is strong, but will be hurt unless he makes up with Sen. Matthew Neely.

New York—State Atty. Gen. Jacob Javits is expected to go against Democrat Sen. Herbert Lehman. Javits showed his vote-getting strength in winning in 1954, although Democrats placed Averell Harriman in as Governor.

A new catalog for federal buying will be ready by the end of the year. Over four years have been spent on the project to reduce the identifying numbers of items the government buys from 4½-million to under 3-million, by allotting the same identification number to items that are now called by different names in different government departments. This could cut much duplication of purchases. And officials believe that the catalog, when fully used, will also result in reduction of duplication in purchasing contracts—and thus, in the number of companies that sell to the government.

Adjournment of Congress by July 15 is the new target of leaders. Work on the 1957 appropriations, always a key to adjournment, is ahead of schedule. Except for foreign aid money, the appropriations should be voted by July 1. A July 15 date may be missed, but Congress should be able to quit soon thereafter.

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#### COUNT ON COLOR...



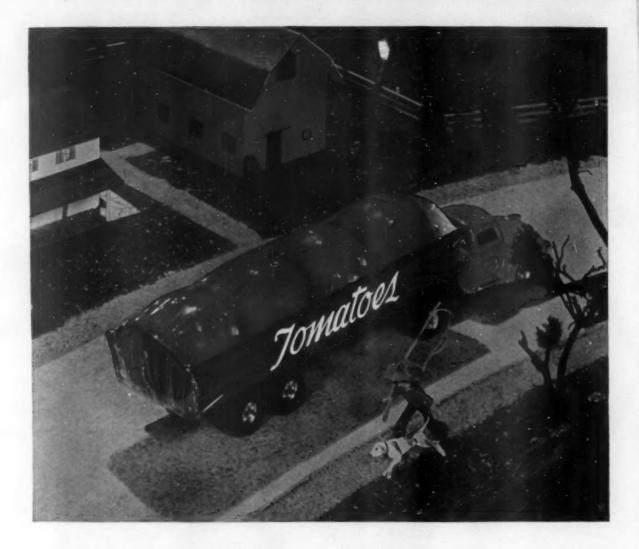
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CID overcomes the limitations of typical trailer "models" by giving you the choice in trailer design. For example, when you specify a CID trailer, you actually order the unit part by part—selecting from a wide range of standardized interchangeable components the particular sub-

assemblies that best meet your hauling needs. You choose the appropriate running gear, underframe, floor, front, nose cap, side panels and lining—and we assemble them into a finished unit. The result is: a custom designed container—on wheels.

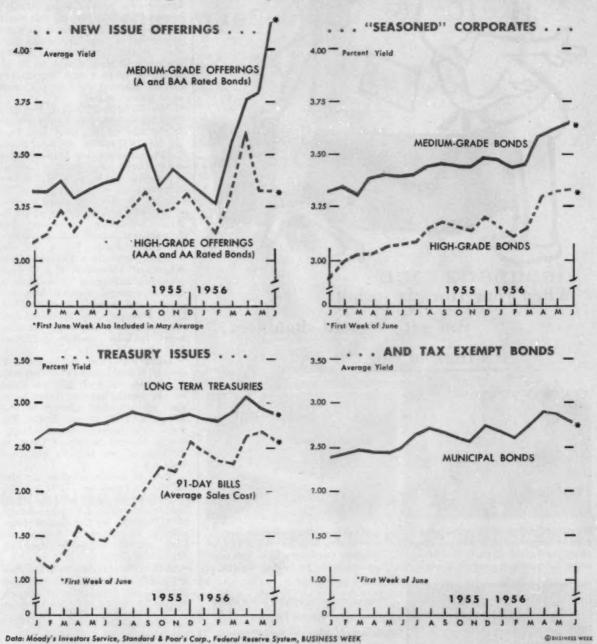
Let us show you how profitably a CID trailer will perform for you.





#### FINANCE

## How Recent "Tight Money" Has Hiked the Yields of . . .



## But Borrowers' Pain Eases a Bit

If you're planning to do some borrowing in the coming weeks, chances are the costs of the deal won't squeeze you quite so much as you may have feared. As the charts indicate, yields in the money market have halted their

steep climb, and have begun to level off or even to decline.

But don't get too happy; you still won't be able to consummate your borrowing program at the happy costs that prevailed in late 1954 and early 1955. The Federal Reserve Board in recent weeks has approved a few steps to ease bank reserves, but there is no clear indication of any drastic reversal of its earlier belief that money rates have become too "easy" for the good of the



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national economy. This is notably true for long-term credit.

• Long-Term—For borrowers in search of long-term funds, the competition in the coming months is likely to be the keenest since the year began. Moody's Investors Service points out that spending for plant and equipment "is slated to rise by so large an amount that, even though corporations' internal generation of funds should rise by \$2-billion or so to a new record, their external financing this year will surely set a postwar record."

The Investment Dealers' Digest, a Wall Street trade journal, says definite or tentative offering dates have been set for \$612-million of new bonds. Public sale of another \$810-million is

being actively considered.

American Tel & Tel's \$250-million debenture offering is the biggest of the king-size offerings that lie just over the Wall Street horizon. Other giants include \$80-million Tennessee Gas Transmission bonds and debentures, \$78-million Pacific Tel & Tel debentures, \$60-million Detroit Edison debentures, \$50-million U.S. Rubber convertible debentures (if stockholders give an expected approval later this month), and probably the \$75-million C.I.T. Financial Corp. debentures that were postponed last week "pending more favorable market conditions (BW-Jun.9'56,p172).

(BW-Jun.9'56,p172).

• Lesser Fry-There is also a whole slew of \$20-million-to-\$40-million utility offerings that seem definitely slated for the coming months. Other probables are debenture offerings of \$30-million by J. P. Stevens & Co., the textile manufacturer, and of \$25-million by General Acceptance Corp., in the fields of auto financing and small

loans.

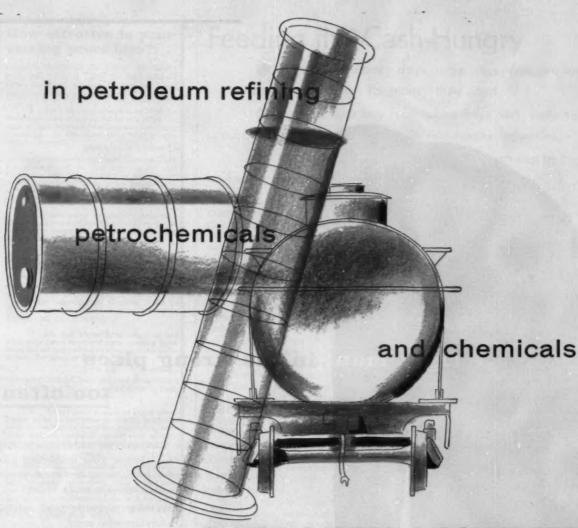
Scads of smaller offerings are also on the projected list. Here too the utilities predominate, but the items include convertible debenture offerings of \$15-million by Combustion Engineering, \$12-million by Capital Airlines, and \$11-million by American Machine & Foundry.

• Underwriters—Up to now, the massive weight of offerings, both made and pending, has had relatively little effect on the bidding and pricing policies of the underwriters. But investors have not overlooked that factor, and caution remains their watchword. As a result of too rich pricing, the underwriters are finding their shelves cluttered with a growing litter of remnants—some quite large—of issues that range

from slow-moving to outright sour.

Streeters report that there is also considerable congestion in the mortgage market. There, the dearth of available long-term funds continues, as corporate borrowers take a growing share of the

lendable money. END



#### FLUOR OFFERS A COMPLETE

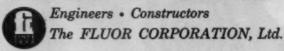
#### ENGINEERING AND CONSTRUCTION SERVICE

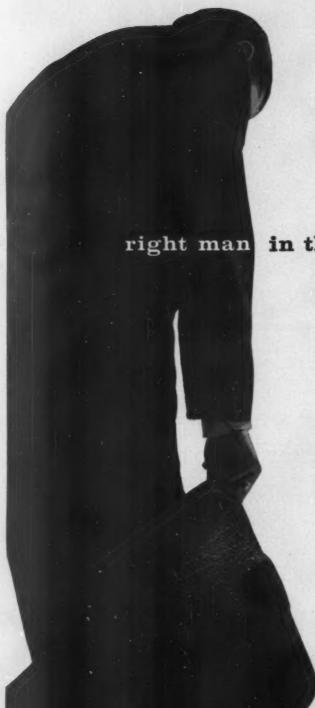
from project concept...to finished plant

Neither raw-material source nor end-product classification limits Fluor's services to the process industries. A completely integrated organization and the broad experience of its staff enable Fluor to undertake projects of any size... any complexity... any process... at any location. Fluor's evergrowing reservoir of experience is gleaned from all the industries and fields it serves: petroleum refining, petrochemicals, chemicals, electric power, heavy construction, and atomic energy. We can thus bring to bear many new ideas and techniques on the problems of any one industry.

And since we are equipped to accomplish every phase of a new facility—research, design, engineering, construction—we think in terms of the entire project rather than of an isolated part. The result is a 65-year record of successful plants with low initial investment and minimum operating costs.

## FLUOR





right man in the wrong place

#### too often!

He makes too many calls on cold prospects. Any salesman does... unless your marketing program is geared to put him, by invitation, across the desk from men who are ready to buy.

In such a marketing program, good catalog procedure is a fundamental must.

Industrial buyers almost always use catalogs to sift suppliers and decide whose salesmen to call in. So the salesmen who spend the most time with ready buyers are those whose catalogs are immediately and conveniently accessible in the offices of all good prospects.

The questions in the adjoining column will help you decide how effectively your present catalog procedure is working at the job catalogs do best: getting your salesmen more invitations to call on ready buyers.



Sweet's Catalog Service

a division of F. W. Dodge Corporation 119 West 40th Street, New York 18, N. Y.

#### How effective is your catalog procedure?

Careful answers to these questions will tell you. A "no" to any one of them is good reason to review your entire catalog program.

1. Do you have a tested system for making sure your catalog reaches the important buying influences for your products...in the companies with volume buying power? yes 🗌

(Sweet's market-specialized Catalog Files are distributed to the companies that have over 80% of the total buying power in the industries these Files serve. Individuals who receive them are continually checked for their buying influence.)

2. Does your present system pro-vide for the immediate distribution of your catalog to every good, new company that comes into your market?

yes 🗌

(With daily access to Dodge reports on new plant construction, plus continuing market analysis and field research by its distribution staff, Sweet's spots potential new sources of business immediately; distributes appropriate Catalog Files to them as soon as their buying power is known and qualifies them.)

3. De you know how many of the men who have received your catalog have kept it, and have filing systems which make it easy for them to find and use it?

yes 🗌 no 🗆

(Catalogs bound, indexed, and distributed in a Sweet's File are always easy to find, cannot be misfiled or lost.)

4. When your customers and prospects want to compare products, preparatory to calling in possible suppliers, does your system make it reasonably certain that your catalog can't be overlooked?

yes 🗆

no 🗆 (Sweet's binds the catalogs of comparable products next to each other, indexes each one for easy reference. This minimizes the chances that any suitable product cataloged in a Sweet's File will be overlooked when ready buyers are searching for the answer to a need.)

5. Are you sure that all of your important customers and prospects have your current catalog?

(Sweet's distributes new Catalog Files each year. Every user of a Sweet's File is therefore certain that each catalog bound into his Sweet's File provides him with the up-to-date and correct buying data upon which he can rely.)

6. Has your catalog been prepared to give your customers and prospects exactly the kind of buying information about your products that they should have...and will it logically lead them to take the next buying action you want them to take: call in your salesman or distributor; write to you; or specify your product?

yes 🗌

(Sweet's has been designing and producing market-specialized, action-evoking catalogs for fifty years... has had notable success in doing so... designs and produces more manufacturers' catalogs, by far, than any other company in the world.)

There is a Sweet's Catalog Service office near you. A call or letter to any one of them will bring you prompt and thorough help in making sure your catalog...its design, pro-duction, and distribution... results in more orders for you at the lowest possible cost.



## Feeding the Cash-Hungry

These tight-money days, more treasurers are turning to commercial factors for money they need.

Factors, who buy receivables from their customers. are having a boom, especially in non-textile industries.

But the market isn't all their way: Costs can be high, and some don't like the link to factors.

When money gets as tight as it is today, many corporate treasurers find that their traditional sources of cash can't meet their needs. In the past six months, plenty of customers have been turned away from their banks without getting the funds they needed. And high interest rates in the bond market have discouraged some would-be borrowers from trying that route.

More and more of these disgruntled, cash-hungry customers have been looking in another direction lately-to the commercial factoring houses. How much and how hard they've been looking shows up in these companies' volume figures. In the first five months this year, the factoring business' volume is estimated to be up 25% over the

record it set in 1955. • Historical Trade-This fast climb is bringing fresh prosperity for a business that's well over a century old. Since the early 1800s, factoring has been the textile industry's popular technique for getting cash when it's needed. The method is simple: Manufacturers sell their accounts receivable to a factor. The factor collects the bills from the manufacturers' customers. The factor assumes all responsibility for collection -he has no recourse to the manufacturers if customers don't pay their bills.

In textiles, where operations are complex and the field is full of small companies, factoring fits like a glove. The manufacturer gets his cash as soon as he ships his goods to his customers, instead of waiting 30, 60, or 90 days for payment under terms of the invoice. This is especially helpful to processors and manufacturers in seasonal lines: They can have cash when they need it most-in their production build-up just before a selling season starts. Usually, the factors will let a manufacturer take down a cash advance against future receivables, so that he can carry an inventory and still not use up his working cash.

· Costs-This service costs a customer 6% a year on the amount of cash he gets, plus a factoring charge that averages around 1% of net sales. If the customer at any time has more receivables in the hands of the factor than he has drawn down cash for, he is paid interest at the rate of 6% a year on this

· New Fields-Today, the textile industry is still the factors' biggest customer. But plenty of heavy industrial customers are flooding in lately-plastics, chemicals, electronics, and machinery makers are all turning to the factors. "The biggest reason for the upsurge in our business is, of course, tight money and the difficulty smaller companies have in obtaining bank loans," says one factor. Another points out that "heavy working capital needs, a desire to eliminate the risk of carrying receivables, and the uncertainty of the future course of credit rates," are important elements. Prospects for Growth-Walter M. Kelly, president of Commercial Factors Corp., one of the biggest factoring houses in the nation, has cited six reasons why factors are working overtimeand will continue to do so for some time:

 Industry is demanding longer selling terms to meet increased competi-

 Manufacturers are having to keep larger inventories.

 Companies need larger amounts of working capital and must use what they have more effectively.

· Manufacturers' break-even points are generally high today, and they have to drive for higher sales volume if they're to keep profits from dropping.

· To get this higher volume, companies are having to sell in more marginal areas, thus increasing the risk of credit losses.

· Manufacturers' fixed costs are high, but they can be cut by shifting bookkeeping and accounting burdens to a factor and letting him make a thorough check of possible cost-cutting

Last year, Commercial Factors' volume was around \$400-million, and this year it guesses it will do at least 10% better than that, even allowing for a possible slowdown in the next six months. Commercial is one of three companies that comprise the biggest stable of factors in the country. Along with William Iselin & Co. and Mein-

## Group **Major Medical** Insurance

another modern Group Insurance Plan from New York Life!



#### Protects employees against extreme cost of major illness or injury!

Most health care coverages included in group insurance contracts are adequate for average sicknesses and accidents which are neither long in duration nor extremely costly.

Major Medical Expense Insurance helps protect employees against the long and expensive illness or injury which can wipe out savings-even leave a man in debt for years. This outstanding New York Life plan can be written separately or integrated with a basic hospital-surgical-medical expense insurance plan, if so desired.

Get the facts today about this upto-date Group Major Medical Plan. Write or see your New York Life agent or your broker.

New York Life offers a complete line of Group Insurance. Also Employee Protection Plans are available for small businesses having 10 or more employees. The plan you choose can be tailored to meet the needs of your organization.

When you think of Group Insurance . . . think of New York Life

#### **NEW YORK LIFE** INSURANCE COMPANY

A MUTUAL COMPANY (NULIC) FOUNDED IN 1845



51 Madison Avenue, New York IO, N.Y. (In Canada: 320 Bay Street, Toronto, Ontario)

hard & Co., it is a subsidiary of C.I.T. Financial Corp., the country's biggest independent sales finance company. Together, these three bought more than \$1-billion worth of receivables in 1955. This is nearly one-third of the trade's total. Iselin and Commercial Factors currently rank first and second in the business. Textile Banking Co., a sub-sidiary of Commercial Credit Co., is third largest.

· New Face-Within C. I. T.'s own family of factoring companies you can see the early effects of the change that's coming over the business.

For many years, starting back in the early 1800s, factors were little more than American sales agents for European textile manufacturers, and factoring was only an adjunct of the textile

Today, factors are generally eager to get into non-textile lines, into any industry where there are many small companies, and a fairly steady flow of goods that are traditionally paid for on 30-day to 90-day terms-although these are by no means hard-and-fast limits for payment.

Shoes, hardware, toys, and plastics companies were all recent customers of C.I.T.'s factors and inroads have been made into electronics, machine tools, and some chemicals.

· Hard Selling-Despite these gains, the factors find they're still having to "hard-sell" their services. To start with, most big companies having plenty of reserves and adequate access to cash through extensive credit lines, don't need a factor's services. So factors do the bulk of their business with companies with annual sales in the \$50,000 to \$5-million range, most of them around \$300,000 to \$1-million a year.

The factors themselves point to perhaps the biggest roadblock in their way. It's the conditioned response that many corporate executives have to the word "factoring." This is based on the fact that a "notification"-telling the customer that the bill is to be paid to the factor, not to the company shipping the material-appears on every factoring customer's invoice. Many executives don't like this because they know that some among them snort scornfully at companies that use factors and say that those companies are "hocking their receivables."

The factors defend their practice of notification by pointing to their long experience in the textile industry, where factoring is a daily routine, and where, they say, notification is accepted as a badge of sturdy backing rather than as a stigma of shoddy operation.

• Cash Slice-Other potential customers are repelled by the cost of factoring. And factors will admit that in many cases their services are far from cheap. They make a big chunk of their money



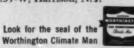
## with Worthington FLEXI-COOL air conditioner

A new concept in air conditioning gives you back the floor space you give up with a conventional air conditioner.

Called the FLEXI-COOL System, this remarkable Worthington development is sectionalized to go virtually any place you please—it can even be hung from your ceiling! That means you can add (or retain) a desk, a showcase or display counter—and still enjoy cool comfort.

What's more, you can have either air-cooled (wonderful where water's short) or water-cooled operation. Or you can switch from water-cooled to air-cooled later on—that's how flexible FLEXI-COOL is!

See your Worthington CLIMATE MAN's unusual demonstration of FLEXI-COOL right in your office or store. Call your Worthington dealer—he's in the Yellow Pages of your phone book. Worthington Corporation, Air Conditioning & Refrigeration Division, Section A.6.37-W, Harrison, N. J.



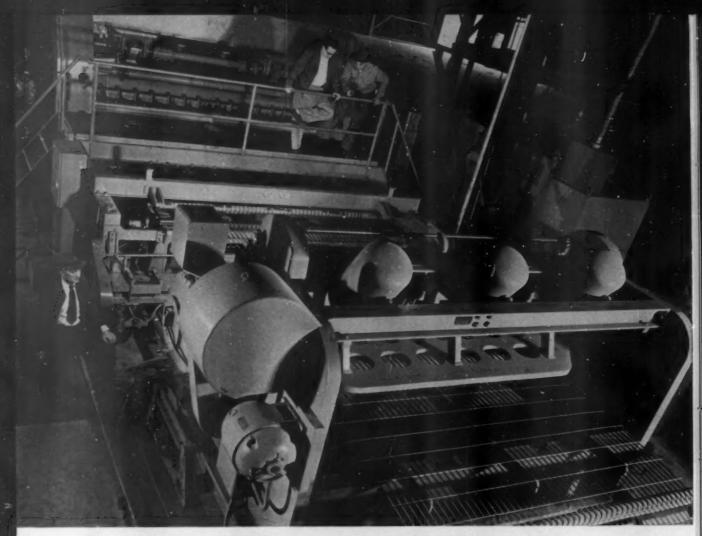


COMPLETE PLEXI-COOL UNIT mounts horizontally on ceiling to save floor space. Individual sections may be placed separately as a remote air- or water-cooled installation.

#### WORTHINGTON



CLIMATE ENGINEERS TO INDUSTRY, BUSINESS AND THE HOME



NEW FABRIC WELDING MACHINE—This half-million dollar installation can handle wire from 7-0 gage to 8 gage to make fabric for use in reinforcing concrete pipes, buildings and other applications.



TIGHTENING 7,000-POUND COIL—Rolls of wire fabric up to 96 inches wide can be produced on new wire fabric machine. Here a huge coil is being prepared for removal to shipping docks.

# NEW Progress

# at Pittsburgh Steel Company

By the end of 1958, America's steel industry will have grown from a 1955 ingot capacity of 128 million tons to 143 million tons annually. Steel companies-large and small-are investing more than a billion dollars a year as they strive to keep pace with the nation's ever-

expanding need for steel.

Responding to trade demands for new lines of finished products, Pittsburgh Steel Company is in the forefront of the industry's expansion. Its current improvement and expansion of production facilities is the second major program of growth at Pittsburgh Steel since 1950. The first-the Program of Progress-cost 65 million dollars; the current project totals 15 million dollars.

Just eight months ago, the five-phase project was still in blueprint stages. But now, with work proceeding on or ahead of schedule, 80 percent of the project will be completed by year's end. The remainder will be concluded by the end of 1957's first quarter. Thus, Pittsburgh Steel will have contributed a 14 percent increase of its basic capacity a year and a half before the entire

industry expansion is in full operation.

This expansion-improvement program is already generating benefits for Pittsburgh Steel and its customers. Photographs here show one of the five phases—a brand new automatic wire-welding machine now in production at Pittsburgh Steel's Monessen, Pa., Works. Capable of turning out heavier wire mesh and fabric up to 96 inches wide, the new machine sharply increases the diversity of Pittsburgh Steel's mesh and fabric line. It

will handle wires from 1/4 inch in diameter to the heavier 1/2-inch gages.

The new fabric installation is the first completed phase of the current program. About ready for production is a battery of modern new by-product coke ovens. They will enlarge Pittsburgh Steel's coke-making capacity by 25 percent. Heat has already been applied to the new battery. Coke production is scheduled to begin in late June just when finishing touches are being put on a blast furnace program to give Pittsburgh Steel fully modern iron-making facilities. After that, a major open hearth project and rehabilitation of primary rolling facilities will be rushed to completion. Basic ingot capacity will increase by 180,000 tons of steel a year as a result of the open hearth project.

Because of the current program, Pittsburgh Steel's thousands of customers are guaranteed more quality steel products in a range greater than the company has ever been able to offer in its more than 50 years of

business

Whatever your steel needs-hot and cold-rolled sheet and strip, cold-rolled coated and uncoated strip specialties, wire products from merchant trade to fine wire specialty grades, seamless tubular goods-YOU CAN DEPEND on Pittsburgh Steel, the quality of its products, the reliability of its service.

A member of Pittsburgh Steel's nationwide sales engineering staff is as close as your telephone. He'll be glad

to discuss your steel needs.



SKILLED KNOW-HOW PRODUCES QUALITY PRODUCTS-Years of experience in fabric-making back up the men running new machine. Man at controls, above, keeps an eye on wires passing overhead.



AT REEL CONTROL STATION-Another skilled operator makes sure fabric feeds correctly into coiler. Because the Fabric Department at Pittsburgh Steel is staffed with veterans, high quality is assured.

#### Pittsburgh Steel Compa Grant Building . Pittsburgh 30, Pennsylvania

District Sales Offices

Atlanta Chicago Cleveland Columbus Dollas Dayton

Houston Los Angeles

**New York** Philadelphia Pittsburgh

Tulsa Warren, Ohio



This announcement is neither an offer to sell, nor a solicitation of an offer to buy, any of these securities. The offering is made only by the Prospectus.

New Issue

#### \$50,000,000 HOUSEHOLD FINANCE CORPORATION



4% Sinking Fund Debentures due 1978

Dated June 1, 1956

Due June 1, 1978

**Price 100%** 

Plus accrued interest from June 1, 1956

Copies of the Prospectus may be obtained from such of the undersigned as are registered dealers in securities in this State.

Lee Higginson Corporation

White, Weld & Co.

William Blair & Company

Blyth & Co., Inc. The First Boston Corporation

on Glore, Forgan & Co.

Goldman, Sachs & Co.

Harriman Ripley & Co. Kidder, Peabody & Co.

Lazard Freres & Co.

Paine, Webber, Jackson & Curtis

Smith, Barney & Co.

Stone & Webster Securities Corporation

June 6, 1956

YOUR DAILY BREAD
TRAVELS A LONG WAY

For a kernel of grain, it's a far-ranging trip from the wheat field to the family table. The ripened grain, harvested in the breadbaskets of the continent, must be stored in grain elevators . . . hauled by land and water to great flour milling centers . . . milled and transported to factories and bakeries . . . before it is finally transformed into a thousand different life-giving products.

During this odyssey from field to family, adequate insurance coverage is essential. Johnson & Higgins, with offices throughout the grain and milling regions of the continent, has helped plan and purchase insurance protection for the milling and baking industries for over 100 years. In business insurance, there's no substitute for experience—and J&H experience extends to every field of commerce and industry.

#### **JOHNSON & HIGGINS**

INSURANCE BROKERS—AVERAGE ADJUSTERS EMPLOYEE BENEFIT PLAN CONSULTANTS

63 WALL STREET . NEW YORK 5

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out of their factoring charge averaging from 1% to 1½%. This factoring charge is based on a percentage of the customer's volume, on the risks the factors take on his paper, and on the size of the customer's average invoice. In this way, it often turns out that more cash is involved in the factoring charge than in the 6% a year that a factor charges for the use of his money.

One factor defends the cost this way: "For little companies, the expense is merited. They get credit services and marketing aid that would otherwise cost

them a fortune."

• Services—Factors probe deep into the affairs of any company that buys their services. They must approve every sale the company makes, they constantly weigh in with suggestions on production and management as well as sales and distribution. Even personnel problems come under the factor's purview. Companies don't always accept the factor's suggestions, and some get rankled by what they term "meddling"

by what they term "meddling,"

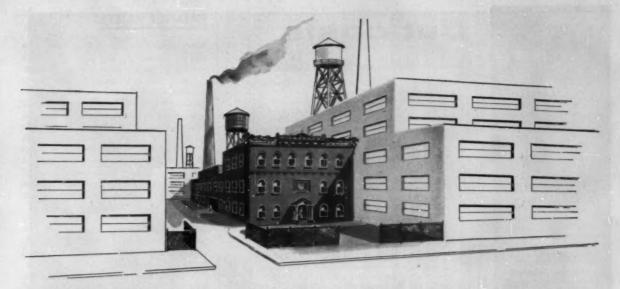
• Where They Headed—The factors themselves aren't in agreement on how much expansion outside the textile business will be profitable for them. You can see this division of opinion within C.I.T.'s own factoring family. The biggest, Iselin, has gone heavily into hardgoods lines, shifting more and more of its attention away from textiles. Currently, about 25% of its total volume is in non-textile lines. Commercial Factors likewise has shifted some 15% of its business into hardgoods lines, is currently working on moves into the electronics field.

• Staying Put—The third and smallest member of C.I.T.'s factoring family, Meinhard & Co., has no business in hardgoods, expects to make no attempt to get any. "We can double our business in the next 10 years—and never move out of textiles," says Charles L.

Harding, Jr., its president.

Other factors have sought diversification of their business into lines other than textiles to avoid getting mired in trouble when the textile industry is in one of its periodic slumps. But Harding isn't impressed by this reasoning. "We have to work harder now that some segments of the textile industry are in trouble. But often we get more business when the industry is facing tough times—that's when they need more help, and more dough," he says.

Today, the factors are putting more emphasis on new services for customers, in a further effort to lure fresh business their way. Commercial Factors has established a special staff to tackle its customer's marketing problems, concentrating on development of new markets. With these "extra" services, most factors aim at building up their customers' volume. This is fine for the customer—and for the factor. END



# If you need a new plant... you're already paying for it

If you need a new plant, is it... Because your present facilities are crowded, outdated or too small?

10

Because your markets have shifted?

10

Because you need a better labor supply?

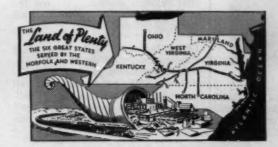
Because important raw materials are too far away?

Whatever the reason, if you need a new plant, it's probably costing you unnecessary expense to operate your present one! In that sense, you're paying for a new plant every day you operate in the old one! If you know that you're going to need a new plant, no matter how long it will be before you "break ground," now is the time to start site-seeing... and the N&W's team of industrial location specialists will be glad to assist you.

These men have had over 50 years of experience in the Land of Plenty — the great six-state territory served by the N&W. Their friendly advice and information has been helpful to countless other industrialists and you can benefit, too. Please call on these men. Inquiries are handled in confidence and without obligation.

Write, Wire or Phone:

INDUSTRIAL AND AGRICULTURAL DEPT. Brawer B-711 (Phone 4-1451, Ext. 474) Norfolk and Western Railway ROAHOKE, VIRGINIA



Norpolkand Western

#### Cut costs

- with multi-use Milcor Celluflor instead of wet-mass construction

Because it serves both as a structural element and as a means for electrification, Milcor Celluflor was specified for use in the Transportation Center now under construc-tion on the "Chinese Wall" site of the old Broad Street Station in Philadelphia's new Penn Center Development

Although the building was originally designed for bar-joist and reinforced-concrete construction, plans were changed when cost comparisons showed that a "blend" of Milcor Cellusfor and Floor Sections would do two important jobs in one installation — and for less money. The Cellusfor "blend" design was specified for 15 of the building's 18 sloors.

Other costs dropped, too. The Celluflor and Floor Sections were erected on beams set  $1\frac{1}{2}$  inches below the girder elevations, reducing the height of the building  $2\frac{1}{2}$  feet - a substantial saving in building materials.

These factors also influenced the change:

- a. Speed of erection. Milcor Celluflor goes up fast, provides working and storage areas for all trades, accelerates the entire job.
- More electrification. The grouping of four cells on 6-ft. centers is a Celluflor exclusive not available in any standard underfloor duct system used with reinforced concrete. This means greater electrical capacity, wider latitude for changes in office layouts.
- c. Low maintenance costs. Simplicity and economy of changes in electrical outlets is attractive to owners and tenants alike.

This Celluflor "blend" idea can be applied to a wide range of conditions. Call on us. Write for Catalog 270.

#### MILCOR Celluflor

Cross-section of Cellufor installation in Transportation Center, Penn Center, Philadelphia, Pennsylvania

Future Telephone Signal Telephone

Milcar Celluflor provides variable capacities to handle any type of electrical need. Cells can be spaced on 6-inch centers to permit the installation of service outlets at virtually any point on the floor.

INLAND STEEL PRODUCTS COMPANY DEPT. F. 4041 W. BURNHAM ST. . MILWAUKEE 1, WIS. BALTIMORE . BUFFALO . CHICAGO . CINCINNATI . CLEVELAND

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#### FINANCE BRIEFS

More than 71-million Americans own stocks, according to the New York Stock Exchange's latest census of shareholders, the first since the Big Board commissioned Brookings Institution to make one in 1952. At that time, there were 6½-million stockholders. The exchange also reveals that 52% of stockholders are women, compared with 49% in 1952. The average woman stockholder? "She's most frequently a housewife, admits to having celebrated her 48th birthday. Her family income is \$6,000 a year, and she owns shares in four different companies.'

The nation's money supply-cash outside of banks and demand deposits adjusted-expanded seasonally in April from \$210.8-billion to \$212.4-billion. The gain, first in three months, was centered in demand deposits, boosted by Treasury payments to private sources. At the same time, savings deposits stuck at their \$77.5-billion March level. It was the first time in nearly two years that savings didn't rise from one month to the next.

Consumers are setting a record pace for repayment of debt, as well as for piling it up, according to a poll of banking and credit executives at Arden House in Harriman, N. Y., last week. Most of the conferees were against Federal Reserve standby controls for consumer debt, and most agreed that tighter money has made them choosier about whom they lend to.

"Don't let it end in a wheatfield" was the battle cry of Oklahoma's Gov. Raymond Gary, who last week moved to assure a link between the Kansas Turnpike and the proposed Oklahoma northern pike. Oklahoma, like other states (BW-Jun.9'56,p166), is considering whether or not to go ahead with new toll roads, and Gary wants a free road to link with the Kansas pike if the answer is "No."

Banking services may have hit a new peak in Jacksonville, Fla. The Florida National Bank there pitches its latest ads at the ladies, inviting them to enjoy its new ladies' department and "park your packages anytime . . . use the attractively furnished parlors for club meetings and card parties."

Litton Industries, Inc., West Coast electronics maker (BW-May5'56,p81), showed nine-month earnings up \$687,-000, or 57% better than the full previous year. Sales totaled \$10.7-million for the nine months ended April 30, compared with \$6.4-million for the same period last year.

owner

architect

erector

F. E. Smith, Inc. Philadelphia

Vincent G. Kling Philadelphia

general contractor

McCloskey & Company Philadelphia

structural engineer

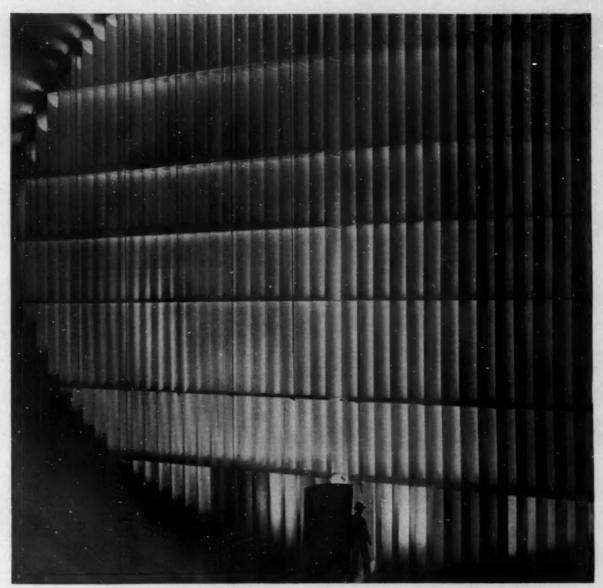
Thomas J. McCormick Philadelphia

electrical contractor

III RESERVED BERTERNI

ALL REPORTED FOR PARTY.

Harry F. Ortlip Co.



Turning vanes in world's largest wind tunnel at AEDC, Tullahoma, Tennessee

## "Altitude" custom-made by Hagan controls

When they test a jet engine in a test cell, engineers want the wind to behave just as it does at a given high altitude. But it won't behave that way at ground level, even when the velocity is right, unless the air is "made to order."

Hagan makes possible custom-controlled air pressure, to simulate actual flight conditions of altitudes above 80,000 feet. In test winds up to and above 1500 mph this is done with Hagan sensing devices and automatic pressure controls.

Simulated altitude control is one of many Hagan automatic control systems and components used at the Arnold Engineering Development Center, Tullahoma, Tennessee... one of the key installations of the U.S. Air Force's Research and Development Command.

If your operation involves process control in any way, Hagan can help you. Hagan produces control and instrumentation components for a great variety of process control functions . . . as well as for aerodynamic testing facilities.

See what Hagan can do for you. Write for Bulletin MSP-133-A.

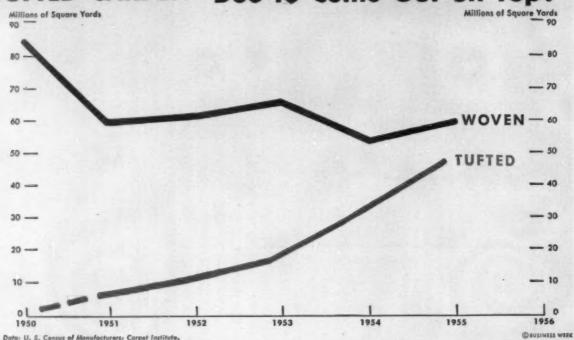


## HAGAN CORPORATION CHEMICALS AND CONTROLS

Hagan Building • Pittsburgh 30, Pennsylvania Divisions: Calgon, Inc. • Hall Laboratories, Inc.

#### MARKETING

## TUFTED CARPET: Due to Come Out on Top?



## How Much More Can It Grow?

Tufted carpet has created a mansized revolution in the hard-pressed carpet industry. In five years, the tufters have come up from a bare 6% of total soft surface floor covering sales to 43%. Ten years ago, all their carpet output was in small rugs and mats. Today the bulk of tufted—between 45-million and 50-million sq. vd. (chart)—is in sizes 4 ft. x 6 ft. and over. What used to be a backyard bedspread industry is giving the veteran of the carpet world—woven carpet—a run for its money.

· Big Questions-In fact, tufted has now reached the point where the revolution threatens to run around and swallow up some of its own protagonists. The question is: Can tufted, with nearly half the carpet business under its belt, keep up its growth? An industry that started out to be the bailiwick of small concerns-and still is. to a great extent-has prodded the giants in the field into competition. Bigelow-Sanford Carpet Co., James Lees & Sons, Mohasco Industries (both the Mohawk Carpet and the Alexander Smith Divisions), C. H. Masland & Sons, consider tufting an integral part of their business. This poses another question: Will tufting go the way of many fastcomers-television, for example-and devour its weaker members?

Furthermore, the advent of new fibers, new techniques has turned back against some of the founding fathers of the tufting trade. Ten years ago, their output was all in cotton. But what promised to be a boom to the Southern cotton business is in danger of fizzling. Although the over-all amount of cotton going into tufted carpets is increasing because of rising output, percentage-wise it's losing ground to manmade fibers. In 1951 only 2% of the tufting carpet yarm consumption was synthetic; now it is 75%.

• Warnings—Some of these questions hovered over the annual convention of the Tufted Textile Manufacturers Assn. that wound up last week in Miami Beach, Fla. Coming of age brings problems that not all the tufted concerns have learned to live with. The 64 convention members heard warnings of the need for merchandising, for upgraded product, for new styling.

Industry leaders were by no means pessimistic. They admit that some small companies are being hurt. Even a few of the bigger ones conceded sales right now are below what the seasonal slump might lead them to expect.

But no one looked for a slump this year. According to the Wool Bureau, yardage output for the first two months of 1956 was 27% ahead of the same 1955 period, while woven carpet was up 14%.

E. T. Barwick, who heads one of the biggest tufting companies (BW— Jan.15'55,p72), believes tufted sales will be within 5% of 1955—up or down. This would seem to indicate a tapering off.

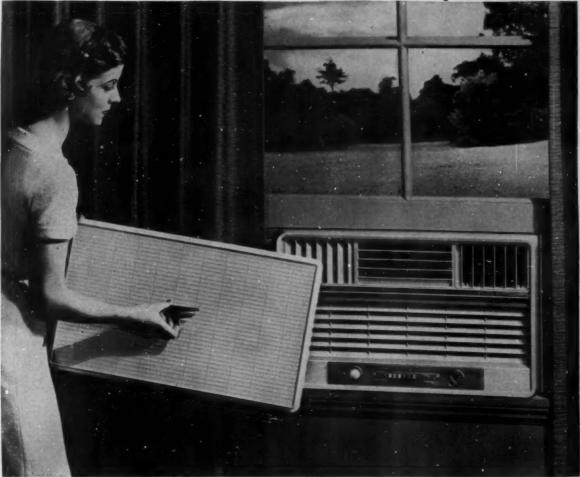
 Fast Growth—How did the revolution come about, and what does it mean for an industry that has been bumping along for years in a more or less depressed state?

A key figure in that revolution, Henry C. Ball, executive vice-president of TTMA, has a triple answer: He lays tufting's growth to these three factors:

- A faster production rate.
- · A much lower-priced product.
- The use of new fibers.

Not all these factors were in the picture when Ball came to TTMA in 1945. At that time, he found an unorganized, floundering group of manufacturers, some 300 in all, whose combined product came to less than \$50-million worth of bedspreads, small rugs, and robes. Almost half the pro-

**Monsanto Chemistry in Action** 



## Can plastic parts give your products new style appeal...new sales potential?

Chances are, they can. Thousands of manufacturers are finding out how plastics make it possible to upgrade product design, enhance sales appeal - and at the same time lower production costs.

Take the experience of the Fresh'nd-Aire Company, a division of Cory Corporation, Chicago. Their new Fresh'nd-Aire push-button automatic room air conditioner is designed with an accessory front panel molded of high-impact Lustrex\*-a rubber-modified styrene molding compound manufactured by

The plastic panel, called the "Style-Gard," snaps snugly in place to provide a decorative mask for the operating controls when the unit is not in service. It also seals out winter drafts. This unique feature gives Fresh'nd-Aire salesmen an impressive plus, both in design and performance.

The unique qualities of Lustrex styrene make it the ideal

material for countless similar applications. Its rich, easy-toclean surface is warm and smooth to touch. It offers great dimensional stability, outstanding chemical resistance. It is tasteless, odorless, non-toxic.

Monsanto supplies Lustrex in special formulations for desired properties such as exceptional impact resistance or tolerance to heat. The limitless color range eliminates extra finishing. Easy moldability into intricate shapes simplifies assembly problems. Light weight saves on shipping.

Plastics have been called the raw materials of progress. Perhaps they can make money for you. To get information about qualified custom molders who can serve you in the application of plastics to your design problems, write Monsanto

Chemical Company, Plastics Division, Room 266, Springfield 2,

Massachusetts.

Where creative chemistry works wonders for you



An Eastern food processor had a problem. A battery of mixing machines must run, unattended, overnight and over weekends. The product is a very "temperamental" substance. Its consistency can change very quickly and for any one of many reasons. If it thickens excessively while the machines are operating unattended, a lot of ingredients and machinery can be ruined. The solution—find a way to automatically detect such trouble at its beginning and shut down the machines immediately.

Square D Field Engineer Jack Utley was called in. He studied the problem and came up with a simple, inexpensive solution... electrical control panels utilizing instantaneous trip relays for torque limit control. Not only does this equipment detect trouble and stop machinery...it signals the American District Telegraph Company who alerts the factory superintendent...all in a matter of a very few minutes!

At your service-in 3 important ways

Field Engineers are available through Square D branch offices in all principal United States cities—and in Canada, Mexico and England. Backing up these engineers are the design and manufacturing facilities of 13 strategically located Square D factories and the localized services of a nation-wide network of authorized electrical distributors.





NOW...EGAM PRODUCTS ARE A PART OF THE SQUARE D LINE!

SQUARE D COMPANY

duction came from machines set up in homes.

• The Process—Tufting is essentially a sewing operation. The needles (up to 1,800 of them), each threaded from its own spool, penetrate a backing material simultaneously, making countless loops or tufts. For "cut-pile," minute knives clip the loops as the needles leave the backing; for a twist-pile effect, an attachment twists the cut ends. A thick layer of liquid rubber latex applied to the backing locks the loops in.

Ball felt that this was a process to shake the complacency of the conventional woven carpet manufacturers. He believed the soaring postwar prices of woven carpet had narrowed the market to the danger point. As a matter of fact, sales of carpet per household increased from an average of 1.5 sq. yd. in the 1935-39 period to 1.6 in 1952.

Research Aid—The tufters themselves didn't have the money for the research job that Ball felt the industry needed if it were to challenge woven

manufacturers came to the rescue.

In 1946, the first machine capable of turning out a 6-ft. seamless tufted carpet appeared. Today the machines range up to 18-ft. widths. The largest machines, says Ball, can sew about 360 sq. yd. of carpeting an hour—roughly 20 times the production rate of the conventional carpet loom. Tufting has another cost advantage over woven carpet: It doesn't require the skilled labor that weaving demands.

carpet. But varn makers, equipment

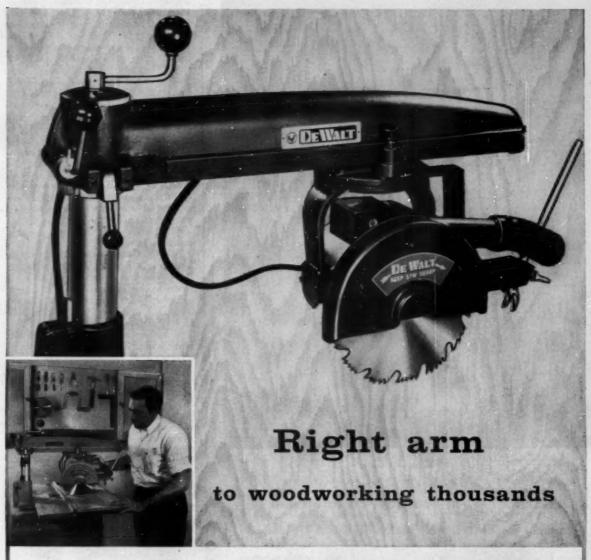
• Price Differential—Some idea of the price differential between woven and tufted shows up in a comparison of two Bigelow-Sanford lines. Its Sonata, a woven wool carpet of quality grade, retails at about \$25.50 a sq. vd. Its lush, high-pile tufted line, Waikiki, a blend, sells at about \$9.95.

Two years ago, another tufting development opened up new fields in styling: a device that gets a sculptured floral or scroll design by shortening or lengthening loops through tension controls. It's possible to get as many as four different surface heights in both cut or loop pile.

The advent of new fibers brought new life to tufting. Just as the manmade fibers gave the woven industry an alternate to wool, they gave the tufters an alternate to cotton. The blends are supposed to add soil resistance and resilience—a quality the earlier, all-cotton tufted carpet lacked.

• Color Advances—Tufting has benefited from the color advances that have aided the weavers, too. Woven wool—or wool of any kind—has always had a hard time soaking up pastel shades; the cottons and synthetics take to them like ducks to water.

One new dyeing process is solu-



It's the arm of an AMF De Walt® Home Power Shopthe original overhead radial arm saw that automatically duplicates the arm movement of expert carpenters... that's made experts of do-it-yourself fans by the thousands!

AMF De Walt owners have been building their own lawn furniture, erecting car ports, making indoor furniture and cabinets...doing expert carpentry quickly and easily. And they save money and have fun doing it!

This finest and safest of all home power shops is designed on the same principle as the famous De Walt industrial models, proved throughout industry for

nearly 35 years, by 250,000 users. The De Walt arm raises, lowers, swings right or left for miters. Motor and saw ride on arm, swivel for rip, tilt for any bevel ... with calibrated scales for all adjustments. Powerful direct-drive motor accommodates any circular tool ... makes De Walt 12 professional power tools in 1!

See for yourself why do-it-yourself fans and industrial leaders agree, De Walt is unmatched for safety, versatility, simplicity of operation...for efficient cutting at its finest, at home or in the plant. Sizes from 9" to 20", ¾ to 10 hp...from \$239, with Easi-Budget Payment Plan. See your dealer or send the coupon below.



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- □ Please send FREE Illustrated Booklet on De Walt Home Power Shop
   □ Please send New IDEA Book for Industry

Address

City\_





# Beautiful things deserve "Beautiful" care ESPECIALLY WHEN YOU MOVE LONG-DISTANCE

It may be a lovely silver tea service like this one... or perhaps it's a handsome crystal lamp. It may be any of many different things which every household has... some high in monetary value, others priceless in sentiment. But whatever you have, Mayflower Long-Distance Moving Service is planned to provide the finest care not only for your most treasured possessions, but for all your belongings. Whether you are moving yourself, or others for your firm, let your nearby Mayflower agent show you why the Mayflower way is easiest for you and safest for your furniture!

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tion-dyed rayon, which came into prominence last year. This is rayon to which the color is added while the fabric is still in solution, "locking" the color in.

It has its disadvantages, however. It means carrying an inventory of all colors, and it means ordering large amounts of a color at a time—50,000 lb. is the smallest amount feasible. This comes hard in the smaller concerns. It has the disadvantage, too, that it would tend to standardize color—for an industry in which color is one of the major competitive advantages.

In spite of these drawbacks, Hartford Rayon, a division of Bigelow-Sanford, is leading the way in producing solution-dyed rayon for the industry. And meanwhile, advocates of piece-dyed carpets (made white and then dyed) are working at an improved dyeing process called pressure-dyeing.

• Higher Consumption—With all its pluses, tufted carpet appears to be on the way to doing what woven has tried to do for years: increase per family use of carpet. Last year the figure jumped—from 1.6 sq. in. in 1952 to 2.2 sq. yd. in 1955.

What's more, it would seem that the lower prices of most tufting has brought carpet within the range of the lower-income pocketbook. C. H. Masland, for example, brings out tufted wool that retails at about \$8.95 a yd., about \$1 less than the cheapest wool in its woven lines. And its tufted cottons go as low as \$4.95.

• Prospects—For all these reasons, the tufted people talk of big things for the future. Says Ball: "In 10 years a woven wool carpet will be an antique and an oddity in this country. Within 5 years there will be over 100-million sq. yd. of tufted carpet produced in the U. S. each year. In 20 years, the country will know no carpet other than tufted, and the majority will be in synthetic and synthetic blends."

Naturally, the big woven producers don't go this far. Some—Firth Carpet Co. is one—aren't in tufting at all. Others feel that tufting still has to go through the trial of actual wear and tear. Some, like C. H. Masland, think that tufting has reached its peak. That's because it is harder to get design and color effects in tufting, and new lower-priced weaves are offering competition. Still others—including some of the big weavers—believe it will continue to grow. Bigelow-Sanford, which bought its own tufting mill in 1950, reports its tufted business in the first quarter of this year was 50% ahead of the same 1955 quarter.

the same 1955 quarter.

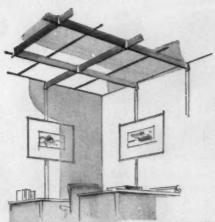
Who will eventually get the fat lower and middle market that has eluded the carpet trade for so many years is a question. But there's no question that tufted has staked out its

claim. END



## THIS MAN'S JOB ...

#### to keep you from making costly lighting mistakes



Sylvan-aire—newest version of complete wallto-wall lighting system by Sylvania. Floods room with soft, diffused light...has optional soundcontrol features. One of many beautiful Sylvania functional designs your architect-engineer can specify. Write for detailed information.

Before you invest in a capital item such as *lighting*, isn't it wise to talk to the best qualified advisers you can—your architect and consulting electrical engineer? It's the responsibility of these experts to prevent costly mistakes in lighting.

The architect and engineer usually work together on lighting plans. Whether you are contemplating an office, store, school or factory, these are the men who know most about all sides of the lighting problem, both in design and in function. Each has learned through professional training and experience how to make your lighting wants into realities . . . how to give you the best quality lighting for your money . . . how to assure you of trouble-free performance and rock-bottom maintenance costs for years to come.

Realizing this, we at Sylvania make the professional style and quality of fixtures that your architect and your engineer would be proud to specify. We urge you to take your lighting problems to them *first*.

SYLVANIA ELECTRIC PRODUCTS INC.
Lighting Division—Fixtures, One 48th Street, Wheeling, West Virginia

#### SYLVANIA

... fastest growing name in sight

#### WHAT MAKES CHESSIE'S



#### "On the Road to Mandalay"

The easiest trade route from much of the American heartland to the far places of the world is through C & O's Atlantic seaport at Newport News, Virginia. Located on Hampton Roads, America's second busiest harbor, Newport News is expanding its port facilities to better serve its growing world commerce.

To handle the increasing imports of iron, chrome, manganese and other ores, Chesapeake and Ohio's new bulk cargo pier goes into operation in November. Costing more than \$8 million, this new pier can handle with ease more than 8 million tons of imported ore a year.

Nearing completion, a \$3 million addition to C & O's great coal docks at Newport News will increase the coal loading capacity to more than 2½ million tons per month. Over these piers, Chesapeake and Ohio loads almost half of the coal which this nation exports to fuel the fires of Europe's booming industry.

At the same time, C & O's mammoth classification yards are being expanded and rearranged to handle a better balanced traffic flow as more and more of the cars that carry coal down to the sea return loaded with imported ores for America's industry.

These new export-import facilities are only a part of C & O's continuing program of development and modernization. Up and down its 5,100 mile system, improvements totaling \$100 million are now in progress which, added to the half billion spent in the last ten years, makes this practically a new railroad. Chessie is growing and going!

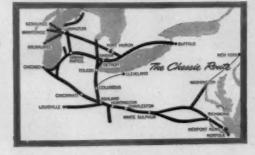


New bulk cargo pier, now under construction, will handle increasing imports of semi-precious ores. General export and import tonnage in 1955 was 70% ahead of previous year and is heading for a new record in 1956.

Are you interested in any phase of import or export shipping?
Write for free, illustrated booklet about C&O's port of Newport News, Va. Address:

#### Chesapeake and Ohio Railway

3804 TERMINAL TOWER, CLEVELAND I, OHIO



## In Marketing

## Detroit Tries Licensing System To Keep TV Repairmen in Line

Since about the time the first TV receiver was sold, the industry and the public have been plagued by two types of repairmen:

 The incompetent or undertrained, who run rampant with pliers and screw driver through the hapless owner's

· The dishonest, who make unnecessary repairs, over-

charge, or replace good parts with bad.

The city of Detroit has tackled this problem by passing an ordinance requiring all persons who install, service, maintain, or repair TV receivers to get a license from the city. Officials believe it is the first and only such ordinance in the country.

Last week, the seven-man board set up under the law met to work out details for granting licenses to qualified applicants. After licensing requirements are drawn up, the board will keep watch on TV repairmen

and their advertising.

Board members are appointed by the mayor. They include service dealers, TV engineers, a member of the city Dept. of Buildings and Safety Engineering, and a representative of the police.

Need for protecting the public was well documented in Detroit. The Better Business Bureau's Consumer Div. reported that complaints about poor service averaged 75 to 80 a month over a five-year period.

Three years ago, the BBB conducted a test by planting TV receivers with known malfunctions in 33 Detroit homes. Then they called in repairmen who had advertised unusually low rates. The BBB found that 30 out of 33 servicemen overcharged, made fictitious charges, or replaced parts unnecessarily. But attempts to prosecute several of them failed because of the difficulty of showing criminal intent.

Under the new ordinance, incompetent or dishonest repairmen can have their licenses revoked. Then if they continue to practice, they can be prosecuted for violating the ordinance.

GM Bolsters Car Dealers

As Wholesalers of Parts

General Motors Corp. is making a change in the distribution of replacement parts that will further strengthen its car dealers as parts wholesalers. It is ending the competition they currently face from wholesalers handling certain other GM parts.

Some GM replacement parts are made by the nine car, truck, and body divisions; others are turned out by the 16 parts and accessories divisions, such as AC Spark Plug. Until January, 1954, the two classes of parts were distributed through separate channels: the car division

parts by car dealers, each covering his particular model; the parts and accessories division parts by United Motors Service Div. wholesalers.

About two years ago, GM reached for a greater share of the \$3-billion parts market (BW-Apr.3'54,p106). It decided to let car dealers also handle parts distributed through UMS, set up a system of discounts permitting them to sell the parts at wholesale. To compensate UMS wholesalers, GM began permitting them to sell car division parts that dealers previously had handled exclusively.

Now GM has decided to end sale of car division parts by wholesalers after Dec. 31, 1957. The company will pay wholesalers full refund price plus 5% handling charges for all unsold car division parts at that time.

GM is silent about the move, but most wholesalers feel that the program is being revised because it didn't work out well. William Scott, partner of General Speedometer Service Co., Detroit jobber, feels the program "didn't increase sales as anticipated." He adds, "We can't help but suffer a little from loss of the program."

Another wholesaler was somewhat more critical of GM. "It looks like some of us were sold a large bill of

goods," he said.

However, some observers feel that most wholesalers did not get deeply into selling car division parts and will be able to dispose of their stock by the deadline set.

Sears Runs Up Against Charges
Of Violating Anti-Carpetbagger Law

Sears, Roebuck & Co. is involved in a usury suit in Arkansas. The state's chief assistant attorney general, James L. Sloan, is suing the mail order company as a private citizen. He charges that Sears, in selling him merchandise, violated an Arkansas constitutional amendment that limits interest on loans to 10%.

Sears says it's satisfied that its sale conforms to the

law

Last April, Sloan bought \$393.98 worth of merchandise. He signed a conditional sales contract that provided for: (1) a \$40 down payment, and (2) 18 monthly payments that totaled \$391.15 and included a carrying charge of \$37.17.

According to Sloan, the interest, on his purchase is

12.9%.

Until a few years ago the constitutional amendment that Sloan is citing was pretty well ignored. In fact the Arkansas legislature in 1951 passed a law allowing interest rates higher than 10% on short-term conditional sales. But in 1952, the Arkansas Supreme Court ruled the law invalid.

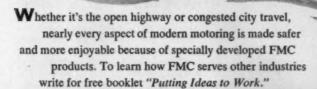
Since then there have been several attempts to amend the constitutional amendment and make such a law valid. Strongest advocates of this currently are auto and appliance dealers. Says Secy. George Benjamin of the Arkansas Auto Dealers Assn., "The 10% provision is an antiquated law. It was passed to protect Southerners from carpetbaggers."

Meanwhile, Sears isn't the only retailer Sloan is gunning for. He warns, "I'm going to jump five or six more

merchants around here right soon."

# Fours ideas to work for

MOTORING





PIPED PETROLEUM, from source to user, requires special hydraulic equipment such as FMC's Peerless pumps, Chiksan swivel-joints, and Weco wing-nut unions.



FINER FUELS embody FMC's special Ohio-Apex phosphate additives, and superior lubricants are fortified with FMC's Westvaco barium compounds.



RUGGED RUBBER tires that endure all travel conditions are produced by processes requiring many of FMC's basic Westvaco, Niagara, and Becco industrial chemicals.



STEERING SERVICE that keeps wheels correctly aligned and balanced for safer driving is expertly performed with FMC's John Bean automotive service equipment.



TRUE TRACTION. for greater skid-protection and quicker stops, is assured by tiny grip-blocks cut into tire tread surfaces by FMC's John Bean tire deskidding equipment.



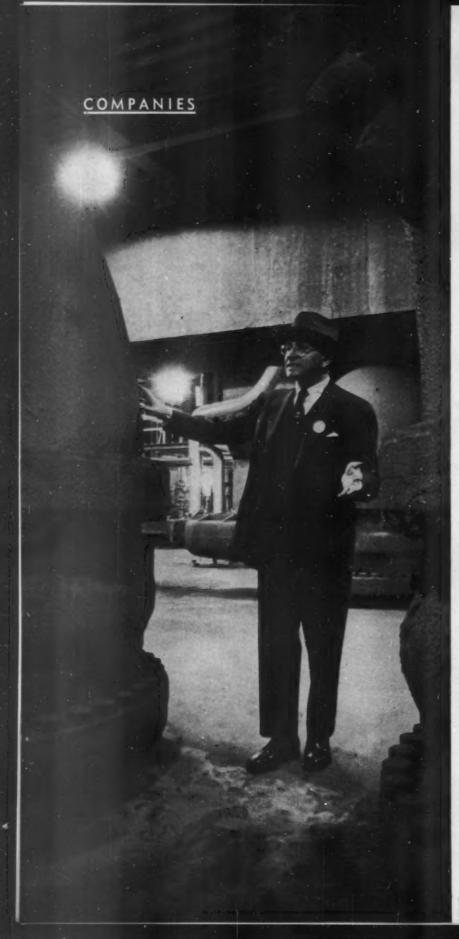
SOIL SAFE, vinyl-coated fabric upholstery materials that contain FMC's Ohio-Apex plasticizers are durable, pliable and easily cleaned with soap and water.



## FOOD MACHINERY AND CHEMICAL

EXECUTIVE OFFICES: SAN JOSE, CALIFORNIA

FMC OPERATIONS: BECCO CHEMICAL DIVISION • BOLENS PRODUCTS DIVISION • CANKING MACHINERY DIVISION • CIRCAGO PUMP CO. • CHIKSAN CO. • FAIRFIELD CHEMICAL DIVISION • FLORIDA DIVISION • DIAGRAR CHEMICAL DIVISION • ONE MECHANICAL FOUNDINES DIVISION • NIAGARA CHEMICAL DIVISION • ONE MECHANICAL FOUNDINES DIVISION • PROPULSION ENGINE CORP. • SIMPLEX PACKAGING MACHINERY DIVISION • SONITH INDUSTRIES, INC. • STOKES & SMITH CO. • WELL EQUIPMENT DIVISION • WESTYACO CHLOR-ALKALI DIVISION • WESTYACO MINERAL PRODUCTS DIVISION



## How to Get

Operating men in the electric utility business gauge their performance on the basis of something they call heat rates. This means the amount of heat energy required by a given turbine generator-or a whole power station or system-to generate a kilowatt-hour of

It's one of the most important figures you deal with simply because it's a precise measure of the power business' principal variable cost-fuel. For example, while a 100,000-kw. unit is operating, it's consuming fuel at the rate of 100,000 times its heat rate every hour. So if you have a poor heat rate, your inefficiency is multiplied at a fantastic rate-and so are your costs. Conversely, if your machine has a very good heat rate, you're saving money.

· Competition-Because your heat rate exerts such leverage on your costs, powerplant designers, builders, and operators are continuously competing for the lowest possible heat rate or, in engineers' terms, the highest possible thermal efficiency. And each year, when the data are published, they calculate avidly to see which station got the best results in the previous year. The rewards that accrue from scoring well can be important indeed.

In the chart on the opposite page, you can see how the competition has fared since 1950. But the chart tells

more than that:

· It shows that the competition is fierce-that no plant has held the title

for more than two years.

· It shows a dramatic attrition, for it takes only a few years for a plant to be down-rated right out of the list of the five most efficient.

· It shows that the electric utility industry works and spends freely in its

drive for fuel efficiency.

#### I. As Demand Grows

One reason the power business has made the rapid strides shown on the chart is the fact that the booming U.S. economy has forced it to build new generating plants at a furious rate for a decade. The sheer demand also forced the industry to concentrate on efficiency-for if delivered fuel costs doubled in, say, 10 years, that 100,000-kw. machine with the poor heat rate would be costing money at a ghastly pace—100,000 times the heat rate times two.

Here's an example: In 1950, the most efficient utility plant was the Philip Sporn station of Ohio Power Co., an

PHILIP SPORN, president of American Gas & Electric, inspects his namesake plant.

## Ahead in the Utilities Industry

American Gas & Electric Co. subsidiary. Last year, it averaged 9,341 Btu. per kwh. Last year also, the Kanawha River station of Appalachian Electric Power Co., another AG&E subsidiary, placed second, using 9,151 Btu. per kwh. So it cost the Sporn station \$113,492 more for coal to generate the same amount of energy as Kanawha.

• Goal—If you think that gain is im-

pressive-which it is-consider what AG&E expects to achieve in 1959. Then it plans to bring in two 450,000kw. units for which thermal efficiencies of 41% are projected. If the company achieves that, each of the new units

will spend \$491,416 less for coal to generate the same energy as Kanawha River (assuming 8,000 hours' operation and \$4 coal in every case).

There's still another bit of leverage that makes the power people attack the heat rate so vigorously. It's this: Power demand doubles every decade. Since power equipment has a 25 to 30-year life, the blessings or the curses of your heat rate stay with you for a long time.

Now, in perhaps three sections of the U.S.-the East-North Central States, the Southwest, and Pacific Coastgrowth has been faster than that. And

in an 18th floor office at New York City's 30 Church Street, to double every 10 years is merely to lose ground.

#### II. Giant of the Industry

The Church Street address is headquarters for American Gas & Electric Co. and its subsidiary, American Gas & Electric Service Corp. AG&E is either the largest or the second-largest privately owned electric power system in the world. Recently, it has been running at just about dead heat with California's Pacific Gas & Electric Co.

Through six operating utilities,

## In the race for top technical performance

No plant stays ahead long

Ranking of electric generating plant by efficiency of fuel consumption

• Each year an American Gas & Electric plant is a strong contender

'50 2 3 5 3 2 '51 5 '52 2 3 5 '53 4 5 0 3 2 5 '54 4 2 '55 5

These five plants (at the top five years ago) have been pushed out of position by newer technological developments

Data: Federal Power Report (except unofficial data for 1955).



TELEMETERING CONTROL CENTER. These Bristol instruments help program gas distribution over hundreds of miles of pipeline.

## Thinking about automation?

If you are, get in touch with Bristol early in your planning.

You'll get the benefit of the experience we've had in 66 years of industrial instrument manufacturing and more than 21 years experience in coordinating these instruments in completely automatic manufacturing operations.

Chances are, a Bristol Coordinated Process Control system can bring true laboratory precision and quality to factory production in your industry as it has for a host of others. Bristol Coordinated Process Control makes possible completely automatic control, measurement, recording, and split-second timing of manufacturing operations—even if too fast or too complex for human operators.

Automation is just one of the ways that Bristol serves industry today. In partially or completely non-automatic processes, for example, individual Bristol instruments, from one to hundreds at a time, keep a watchful eye

on temperature, pressure or vacuum, pH, humidity, liquid level, speed, mechanical motion, smoke density, voltage, current, power, resistance, strain, and many other industrial variables.

On fastening jobs, too, precision Bristol socket screws are exerting their extra holding power wherever resistance to shock and vibration are important. And, Bristol's aviation electronic components help make missiles more accurate for the military and air navigation safer for everyone.

To find out more about any Bristol product — coordinated process control, instruments, socket screws or aviation products—write The Bristol Company, 164 Bristol Road, Waterbury 20, Conn.



AUTOMATION IN TEXTILES. In this modern thread finishing plant, the complete washing and dyeing cycle, including heating, cooling and reversing dye flow, is masterminded by Bristol Coordinated Process Control.

## BRISTOL

PRECISION PRODUCTS
FOR MODERN MANUFACTURING

INSTRUMENTS · RECORDERS · AUTOMATIC CONTROLS · TELEMETERING SYSTEMS FASTENERS · AIRCRAFT COMPONENTS

# "... on the AG&E system faster-than-normal growth is a way of life ..."

AG&E starts on p. 66

AG&E serves parts of seven states. Though there are no really big cities among its 2,300-odd communities in Michigan, Indiana, Kentucky, Ohio, West Virginia, Virginia, and Tennessee, there are more than 4.8-million people. Yearly they not only buy more electricity than the average American, but their use is growing faster.

And yearly, AG&E sluices into its service area a list of new or expanding industrial customers that can only be the envy of regional development men everywhere. There were 32 of them last year—the most spectacular being two aluminum plants to be built by Kaiser and Olin Mathieson (page 88). Together, they'll take at least 600,000 kw. of round-the-clock power—5½-billion kwh. yearly—when they're operating a couple of years hence. By themselves, these two plants will require almost 60% as much electricity as AG&E put into its system in 1945.

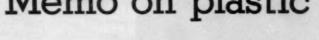
• Way of Life—On the AG&E system, faster-than-normal growth is a way of life. In 1945, for example, it had a system peak load of 1.5-million kw. Last year it was 3.6-million kw. In 1960, it anticipates a 5.8-million kw. peak load.
• Money—From an investment point of view, the record is even more striking. In the 10 years ended Dec. 31, the company spent \$783.9-million for plant. In the next five years, it will spend more than \$700-million, at today's prices. That will yield at 65% increase in capacity, which will triple the system's generating plant in just 11 years.

Financing that \$700-million won't be difficult. AG&E expects to generate about \$322-million internally. That'll come from normal depreciation and retained earnings, accelerated amortization, and accelerated depreciation. Another \$275-million will come from bond issues by the operating subsidiaries-Indiana & Michigan Electric Co., Ohio Power Co., and Appalachian Electric Power Co. These properties also will sell \$50-million worth of their own preferred stock publicly. AG&E will buy about \$31-million in common stock of its operating subsidiaries. Short-term bank loans will account for the rest.

#### III. Job for a Strong Man

Such performance takes leadership. At AG&E, that's Philip Sporn (cover), president since 1947. Sporn was a protege of the late George Tidd, president from 1923 to 1947. Tidd built AG&E





To all executives seeking a material for a new product or a way to improve an existing product:

As a case in point, consider the advantages Dictaphone Corporation finds in manufacturing its Dictabelt records of Tenite Butyrate. This versatile Eastman plastic provides a flexible, lightweight recording material that can be folded, mailed or filed, without damage. It's easily extruded as a seamless, thin-wall tube, and cut into bands—providing a smooth surface for accurate reproduction. Its clear, pure color is modern and attractive. And its low manufacturing cost permits users to record an average day's dictation for just four cents.

You'll meet Tenite Butyrate in many different forms. It is used for oil field pipe . . . for outdoor signs . . . for typewriter keys. Chances are you touch it daily, for auto steering wheels and the new color telephones are made of this versatile plastic.

Whether you're seeking a material for demanding duty or lasting beauty, consider the hard-to-find combination of properties offered by Tenite plastics. We'll be glad to help you or your molder evaluate Tenite Acetate, Tenite Butyrate and Tenite Polyethylene for any use. For more information, write to EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

# TENITE

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"... Sporn's career has been studded with engineering feats ..."

AG&E starts on p. 66

into an unusually effective system during the decades when holding companies not only were developing effective power supply systems out of local light companies, but also were accumulating the public disrepute that lead to the "death sentence" clause of the Public Utility Act of 1935.

Similarly, Sporn has developed some capable people. They include AG&E's three executive vice-presidents. H. A. Kammer probably has built as many large powerplants as any man living. Harold Turner is responsible for the operation of a system that generated and sold more kilowatt-hours and distributed them over more miles of line than any other private utility system last year. Donald C. Cook, newest of the three, handles finance, accounting, and legal.

• At the Top-Sporn took his electrical engineering degree at Columbia in 1917, and joined AG&E in 1920. He became president in 1947. All through, his career has been studded with engineering feats that have won scholarly and professional honors-last fall, he was awarded the John Fritz medal.

Since the atom burst upon mankind in 1945, Sporn has become somewhat of an economist. That arose quite simply, because AG&E has too many dollars invested for too many years and has too great a responsibility for regional power supply for him to ignore so significant a new power source.

Sporn, however, has remained enough of an engineer to have engineered and supervised the building of a huge integrated power system that is second to none in efficiency and in pioneering the power supply art.

Perhaps the best example of this is in the list of the most efficient electric utility plants in the country (chart, page 67). The most striking aspect of that record is simply this: It took AG&E only five years to demote to eighth place the best power plant we knew how to build in 1950.

#### IV. Good Times Ahead

In reviewing AG&E's performance during 1955—its record year—Sporn told stockholders that "I believe 1956 is going to be the beginning of a series of great years."

According to the book, that means quadrupling the AG&E system by 1975—a peak load of 15-million kw., assets of \$4½-billion, sales of about 82-billion kwh. And if that's all these totals



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amount to in 1975, AG&E will have slowed down from its pace of the last decade. Sporn, at least, obviously expects no slowdown.

· The Jump-A company officer said recently, "we've supposed to be pretty capable engineers. Actually, we must be at least as good at load building."

It's there that AG&E gets its jump on the trade. And at AG&E load building takes many forms. It means, for example, incessant promotion of such major residential loads as ranges, water heaters, and clothes dryers. That's conventional enough in any utility. At AG&E, it means selling them hard enough to achieve saturations from 30% to 100% greater than the national average for these appliances.

At AG&E, hard selling also means sending salesmen to cities remote from the nearest AG&E system. There, they talk to architects who will be designing schools and other public buildings. Ordinarily, architects are unaware of electric heat. AG&E thinks it's the best

bet.

The hard sell also includes industrialization of its service area. "We don't believe there is any power supply job that's too big for us," says a company officer. "We work pretty hard to be able to take advantage of whatever power demand comes along. As a result, the customers know they can expand.'

· New Customers-Sporn dreamed for years of bringing the aluminum industry to the coal-based electrical generation of the Ohio River Valley. Last year, Sporn made his first aluminum sale. The resulting load will be the equivalent of the entire Philip Sporn station. "We expect to make 6% on our aluminum business," says Sporn. "We can't live on less and we don't need more.'

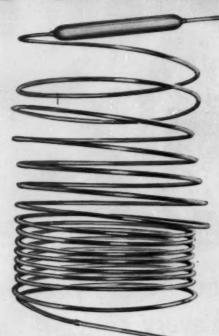
#### V. No End in Sight

It's no accident that AG&E has all this capacity to sell, for Sporn's appetite for building ahead of the load is insatiable. Late in 1954, when business was still declining, AG&E had plenty of spare capacity on the system. Sporn persuaded the directors to authorize two new generators. It was, he said, a tough decision to make. In practically the same breath, he said that AG&É had done a good selling job that year, but that it really had a couple of tough selling years coming up. With 450,000 kw. of new generation coming in on top of that unsold capacity, he was right.

Since then, AG&E has authorized an additional 2.6-million kw. Of that amount, 1.7-million will be operating in 1958. Thus, as usual, AG&E faces a couple more years of tough selling.

About 100 days ago, Sporn an-

### BTU CHARMER



This is another example of **CREATIVE TUBEMANSHIP in action!** 

> Here's a Wolverine product that's designed to snake BTU's out of any refrigeration cycle. It's composed of a bunch-type coil of aluminum tube, a one-piece aluminum accumulator, and two aluminum-to-copper connectors. Manufacturers of refrigerators or freezers can buy the unit preassembled or any of the components individually.

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If you can use copper or aluminum tube or tubularshaped parts—you'll find it a good bet to call on Wolverine. Read the story of Tubemanship in Wolverine's new book. Make it a point to write for your copy-today.

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"...'we just took a look at what loads we could see and anticipate', ..."

AG&E starts on p. 66

nounced AG&E's \$700-million, fiveyear expansion program—the largest ever laid out in one package by any utility.

"We just took a look at what loads we could see and anticipate," he says.

But the largest program of its kind doesn't occupy all Sporn's time. He has his eye on 1965: "We'll have an annual new capacity requirement of 550,000 kw. then and that would mean spending at least \$175-million per year." And he's looking beyond that to 1975. Against that day, he points out, there'll have to be found new and large plant sites and new coal deposits. It will also be necessary, he says, to develop "new designs to make possible the mass generation of electric energy on an even more economic basis."

• Atomic Age—Since most of AG&E's system sits atop major U. S. coal fields, Sporn believes that atomic-electric power won't be competitive in his territory before 1975. Even so, he's interested enough to be spending \$50,000 per month for the next 60 months on atomic-electric research. That's AG&E's contribution to the Nuclear Power Group, an eight-member combine that, with General Electric Co, expects to have a 180,000-kw. reactor operating at a thermal efficiency of 28% in Chicago in 1960.

Spending so much on atomic research pays considerable tribute to Sporn's imagination because, before he has spent that \$3-million on NPG, he will have brought in on the AG&E system two new conventional generators that will be 166% bigger than the NPG reactor—and will operate at a thermal efficiency of 41%.

There's other evidence as to where Sporn sees the power business heading. But until atomic and solar energy drive coal back underground, AG&E will make most of its news just as it has in the past—by moving farther and faster in contemporary practice.

For example:

It is expanding rapidly its 330,000-v. transmission system, 43% higher than the highest standard U.S. voltage—an AG&E first.

 It will install two 450,000-kw. generators—73% larger than the world's largest operating units today.

• It is completing a developmental "super-critical" boiler—the first in this hemisphere to generate steam at pressures above 3,206 psi. END



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SOFTITE
Galvanized Sheets



#### MANAGEMENT



LEWIS W. IMM, aeronautical engineer, steers Librascope, Inc., into new products.



BERNARD BENSON of Benson-Lehner stresses systematic evaluation of problems.



SIR ROBERT WATSON-WATT, father of radar, is beefing up a computer firm.



Dr. James B. Rea, scientist and company head, typifies new executive breed that grows . . .

# When Scientists Run The President's Office

If you should happen to be in Paris next week, you could drop in on Monday at the International Congress on Automation and hear a talk on "management feedback controls." The speaker you'd hear is one of the growing group of executives represented in the pictures—Dr. James B. Rea (above), president of the J. B. Rea Co. of Santa Monica, Calif., makers of automatic control systems and electronic computers.

Both the somewhat abstruse subject the application to the management process of the basic theories that scientists use in designing electronics systems and the speaker himself have a special meaning for management men. They typify something new that the automation age is adding to the management picture.

What Rea is really describing in his paper is the development-tied specifi-

cally to modern emphasis on high-level technology—of scientists as businessmen. And Rea himself, with his methods of operation and his management philosophy, is one of them.

• Lab to Front Office—More than ever before, scientists—as distinguished from the more business-oriented engineers are doffing laboratory dusters and jumping into business clothes. You can see this happening in big companies—Avco Mfg. Corp., for example, or General Dynamics Corp. have hired scores of top-level theoretical scientists.

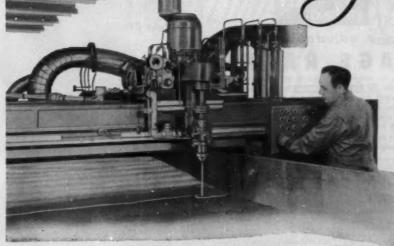
But it's the theoretical scientists turned businessmen on their own who are the real phenomenon. And the transformation is contagious—groups of scientists have been busily setting up companies of their own (BW—Dec.24 '55,p90).

You find this especially in the elecfronics center of the U.S. around Los

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The machine's mixing head moves back and forth across the inclined mold, depositing mixed poly-isocyanates and polyesters which begin almost instantly to foam into Dayton Poly-Koolfoam.



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Angeles. Rea is only one of dozens of scientists and engineers heading Southern California electronics outfits. You see some others in the pictures.

So it is in Southern California that you can take a closer look at these executive scientists—who they are, how they operate, how the break from the campus has changed them, and most important, whether they are forerunners of a new kind of manager in an age when research and rapidly changing technology will require a boardroom seat for the theorists.

#### I. New Breed

In Los Angeles, many top management men have engineering or scientific backgrounds. You think right away of Donald W. Douglas of Douglas Aircraft, one of the Massachusetts Institute of Technology's first aeronautical engineers—and Robert P. McCulloch of McCulloch Motors, a Stanford engineer.

But the scientist-executives in the electronics field are a little different. Most of these electronics men have been trained in physics and many are Ph.D.s. But what's most typical is this: In all cases, the initial impetus for the companies they now head came from their

own technical insight.

That's true for Dr. Rea—for Dr. Simon Ramo and Dr. Dean E. Wooldridge of Ramo-Wooldridge Corp.—for Dr. Arnold O. Beckman of Beckman Instruments, Inc. It's also true for three Los Angeles electronic businessmen who are "imports"—Gabriel M. Giannini, an Italian physicist who operates G. M. Giannini & Co., Inc.; and two Britons, Sir Robert Alexander Watson-Watt of Logistics Research, Inc., and Bernard S. Benson of Benson-Lehner Corp.

• Best of Both—As in the case of a wellplanned cross-fertilization in horticulture, these scientist-executives combine the best feature of both. The scientist's trait that's most evident is application of scientific method. There's almost complete lack of crisis or confusion in the executive offices.

There's also a lot of team spirit, with decision-making much more of a group process than in the average company. And there's much university atmosphere, with ideas having the supremacy rather than authority for authority's sake. (You'd be wrong, though, if you thought that meant there's any less of a caste system.)

But the scientist-executives are no cloistered academicians puttering all day around a lab. Though on the whole they delegate more authority than do many executives, their job is mostly managing. The detailed cogitating is done down the line.

· In the Swim-In fact, once they be-



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Best of all for players and audiences, Durez provides a tone of astonishing, true clarinet purity. You hear it in leading high school bands everywhere. In "The Benny Goodman Story", you see it in the hands of Goodman as a boy.

Demands as exacting as these are being met with Durez phenolics by thousands of manufacturers in developing new and better products.

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#### WATCH WESTINGHOUSE!

WHERE **BIG** THINGS ARE HAPPENING FOR **YOU!**  come managers, these men spend little time in shop or lab. And they take to the accourtements of position and wealth like any other executive (in Los Angeles, of course, that means a swimming pool). Sometimes the change is visible. A couple of years ago, Benson looked like a typical tweedy, slightly touseled graduate student; now he wears well-tailored suits, works in a custombuilt office.

As scientists, they are the hardheaded type. Their social life is pretty much the standard thing for business executives. Their university background seems to have made them more individualistic than many executives, however, less likely to conform. Rea, for example, keeps an Irish setter in his office, drives to work in a station wagon with surfboard attached and goes surfing on the way home.

#### II. How They Operate

That's about as far as you can go in generalizing about the characteristics of this new executive species. In management philosophy and methods of operation, each of the executive scientists has his own views. Some of the differences come out of their varying backgrounds.

• Accidental Push—Rea, for instance, started his own company in 1950 by accident. A Doctor of Science from MIT, he had done engineering flying for Douglas Aircraft, and was working on the Nike guided missile program.

on the Nike guided missile program.

At a cocktail party in 1950, a neighbor who wanted to get into defense business asked his advice. Rea, after some research, suggested automatic controls and computers because of the growth potential. When the neighbor backed out a week later, Rea took his own advice, all the family funds he could lay his hands on, and jumped in.

Rea, in his Paris paper, expounds his philosophy of management in the automation age. The bricks that build electronics systems—such things as information theory and feedback controls—have already been used to create factory production lines control, he says, and will soon be applied to mechanization of office routine. You only have to go one step further to apply them to management itself.

In practical operations, Rea leaves day-to-day steering of his company to an executive committee—made up of a sales manager, an engineering and production manager, and a business manager. That leaves Rea free to look for money and act as over-all guide.

Two-Man Team—At almost the opposite pole in management practice are the scientists who head up Ramo-Wooldridge Corp. (BW—Jan.15'55,p66), formed by scientists who quit Hughes Aircraft Co. Both are active managers, but they divide up responsibilities.

Ramo, as vice-president, looks after technical operations. Wooldridge, as president, takes more of the administrative burden.

Both men believe success in their field lies in assigning top organizational responsibility to the scientist or engineer, and providing him the administrative and business-type assistance he needs.

This method has brought Ramo-Wooldridge to top spot as coordinators or "systems engineers" for both the Inter-Continental Ballistics Missile and the Intermediate Range Ballistics Missile.

• Other People's Ideas—Pres. Imm of Librascope, Inc. (picture, page 74), a University of Nebraska aeronautical engineer, has still a different view of the scientist-manager's role. He see the main job of an electronics company manager as supervising and coordinating other people's ideas—but in a highly technical field this calls for a technically backgrounded person.

In his own company—an autonomous unit of General Precision Equipment Corp.—he encourages the widest range of thinking on products. As a result, his engineers last year came up with such diverse products as an automatic egg candler and a continuous flow of computer for gas mains. Librascope's big task has been on the automatic navigation and bombing system for the B-52 intercontinental jet bomber.

• Bright Young Men-Another scientist who got into business accidentally—by designing an instrument for a neighbor—is Dr. Beckman of Beckman Instruments (BW-May22'54,p178). Beckman's method is to organize everything on divisional basis, hire bright young men to run the divisions, and give them their heads.

His latest catch is Dr. William Shockley, inventor of the junction transistor and one of the fathers of operations research. Though Shockley is pretty much a "pure" scientist, his new division is raring to get going on moneymaking semi-conductor components.

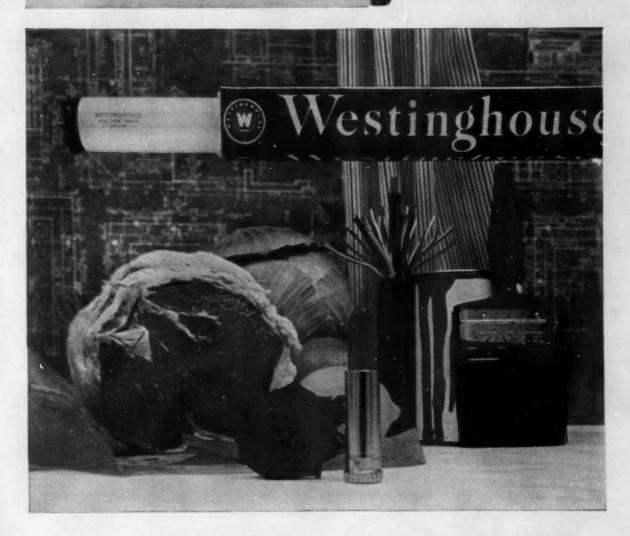
 Imports—Like the native growths, the "imports" among the scientist-executives are accomplished researchers as well as successful managers.

 Giannini has been in business for himself, off and on since he got to the U.S. in 1930. His present company

 a leader in such equipment as pressure transducers and a builder of complete systems—was launched in 1944.
 His business philosophy is along Rea's line

• Benson (picture, page 74), at 34, is youngest of the Los Angeles scientist-businessmen (at 21 he was in charge of the British supersonic guided missile program). His basic rules for his company (started in 1950) are: (1) be extremely systematic in evaluating all pos-

how to judge a fluorescent lamp ... point no.



## ask about COLOR RENDITION

If you're like most businessmen today, you know how the proper use of color can speed a lagging production line, work wonders with office morale, give merchandise extra sales appeal. What you may not know, however, is that the color of any surface—be it desk top or cabbage leaf, electrical lead or your secretary's complexion—is largely determined by how that surface is lighted. And that light just right for Job A may be all wrong for Job B. Westinghouse fluorescent lamps available in seven different shades of "white" alone-offer you precisely the proper color of light for jobs from A to Z. "You can be sure if it's Westinghouse."

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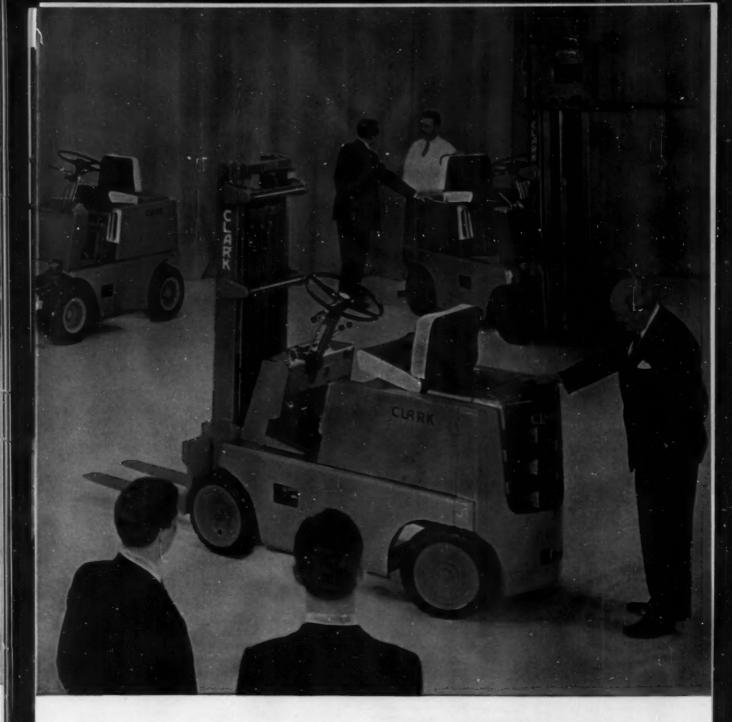


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That's just the beginning. This is a completely new truck with dozens of new ideas . . . ideas you wanted in the *ideal* lift truck. Soon your dealer will be able to show them to you in models ranging from two to five thousand pounds capacity. See him . . . you'll get a real lift.



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You owe it to the life of your business to learn more about Ansul's in-plant fire training service. We will be happy to send you complete details. Write Ansul Chemical Company, Fire Equipment Division, Dept. W102, Marinette, Wisconsin.

Ansul, pioneer manufacturer of Fire Equipment, Refrigerants and Mechanical Refrigeration Products, Industrial and Fine Organic Chemicals.



sible approaches to a problem, so you know which way to go—and why you're not going a different way; (2) emphasize the human being in the system; and (3) set up an effective "feedback loop" from the customer (he gets monthly reports on all his machines everywhere).

• Watson-Watt, 64, the father of radar, spent 30 years as a researcher in Britain, got into business after World War II by organizing companies in Britain, Canada, and the U.S. to provide contract operations research. He got to be president of Logistics Research, at Redondo Beach, Calif., in 1954 through Swedish industrialist Axel Wenner-Gren, who backs the company financially.

#### III. What They Portend

These scientists turned managers exist today in only a few industries. There will always be important areas of business that are relatively non-technical. But existence of the scientist-executives raises this question: Does the rise of technology mean that, as factories, offices, and business become more mechanized, they should all be headed up by scientists?

Con—Rea, for one, doesn't think so.
 He believes that as the management function becomes more mechanized, it will be easier to control. Despite his own background, he'd choose a management-trained man over a scientifically trained man to run a company, if he had to choose between the two.

He agrees that you can apply scientific principles to management, that training in science and engineering is useful in management—but he insists that success of electronics outfits headed by former scientists and engineers is due to the fact that these men have abandoned their scientific role to become managers.

 Pro—Other executive scientists in the Los Angeles group don't share this view; they feel that "on balance" a man is a better manager if he's had scientific or technical training.

Officers at Ramo-Woolridge, and at Ford Motor Co.'s new \$10-million Aeronutronic Systems, Inc. (BW-May 19'56,p200), are among those disagreeing. Both have had problems with nonscientific top management. Both believe strongly that in highly technical work the scientists must sit on top and follow a project through, with administrative and business sides subordinate.

Right now, there are only a handful of electronics companies, and general management is still firmly in the saddle. But it's interesting that in last week's survey of presidents in 500 top companies (BW-Jun.9'56,p110), bachelor of science degrees already outnumbered any other one category.



Chas. Pfizer & Co. antibiotics are blended in stainless steel blenders, in sterile workrooms. Sterile conditions must be maintained for both personnel and equipment. Equipment as shown at right, must undergo periodic beat sterilization and cleaning and yet must function properly after this type of treatment. Pfizer engineers selected Faultless 931-5, Double Ball Bearing Swivel Plate casters for use on their portable equipment because large diameter raceways and dust-proof construction assured dependable performance under exacting conditions. 5" diameter, Plaskite Wheels were chosen because of their non-sparking and chemical-resistant features. They also have non-marking qualities which protect the ceramic and asphalt tile floors used throughout this plant.

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900 Series is a rugged, all purpose swivel plate caster with two full rows of hardened, ground and polished grade "A" ball bearings rolling around full hardened raceways. Full drawn steel horn formed for surplus strength. Complete choice of wheels to suit floor surfaces, loads and operating conditions. 900 Series shown with Renewable Rubber Tired Wheel. Also available with Drawn Steel, Semi-Steel, Vulcanized, Semi-Pneumatic, Ruberex, Plaskite and Rockite Wheels.

#### SERIES 2400 SWIVEL STEM CASTER

blender is easily moved on Fauliless Casters



In another Pfizer operation, sterilized needles and cartridges are assembled. Approximately 36 trays, containing hundreds of sterile needles, are transported on specially designed trucks to the production area where the units are assembled. Faultless 2431-5, Double Ball Bearing Swivel Stem Casters are used on these trucks. The ½ stem fits the stainless steel truck legs. This series Faultless caster gives the easy

swiveling characteristics necessary for movement in confined work areas. The 2400 Series Swivel introduces a new principle that completely eliminates the customary shimmying of ordinary swivel-type stem casters. Two complete rows of balls operating in lubricated, hardened raceways form the swivel bearing of this shimmyless caster. No chance for wobble. Shown with Renewable Rubber

Tired Wheel.

To get the complete Faultless Caster story, simply call your local Caster Distributor listed in your phone directory, or write us today.



### FAULTLESS CASTER CORPORATION

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work steel to make steel work for you

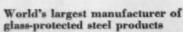
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glass lining for water heaters
performance-proved

# 3 million times

SIXTEEN YEARS AGO, A. O. Smith introduced *Permaglas* water heaters — giving homeowners a new kind of product with a new lease on life. The big difference is in their glass-lined tanks—*Permaglas* water heaters are built to stay rust-free no matter how corrosive the water.

Since then, A. O. Smith has produced 3,000,000 glass-lined water heaters — more, in fact, than all other manufacturers combined. The reason for this overwhelming preference is clear. The glass-lining in *Permaglas* water heaters is the result of exhaustive testing of thousands of formulas developed in A. O. Smith's own extensive research laboratories. It has the specific ability to defeat the corrosive effect of any water from any section of the country — where ordinary glass and cheaper coatings fall down.

And today, *Permaglas* still leads the field — beautifully styled to enhance the modern home. Get all the facts . . . write for free, illustrated booklet "The Story of Glass-Protected Steel" . . . one of the ways we work steel to make steel work for you.



These glass-lined brewery tanks are famous for protecting product quality and uniformity. Permaglas bulk storage units and smokestacks are permanent money-savers for all kinds of industry. Long-life, ceramic-coated heat exchangers make Permaglas home heating and cooling systems your best buy. A. O. Smith's subsidiary, Glascote Products Inc., helps the processing industries lick the toughest corrosion problems.



12 placts in New Jersey, Pennsylvania, Ohio, Wisconsin, Illinois, Texas and California - International Division: Milwaukee 1, Wisconsin





Permoglas and Burkay water heaters

Permoglas ome heating and cooling systems



Glass-lined and stainless tanks

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Vertical

Line pipe,



for the form Permaglas Storage Uni for industry

Pressure vessels, hour exchangers, lass-lined smoke stacks



Gasoline dispensers liquid meters

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Automobile

#### THE MANAGEMENT PATTERN

### Ideas Shift on Executive Pay

EXECUTIVE PAY REACHED new highs last year, according to the scorecard of major corporation pay that BUSINESS WEEK has been keeping since 1950 (BW-May26'56, p103). But the records set in executive pay in 1955 were only to be expected. Business last year was at an all-time peak, and the companies that shared in this prosperity naturally rewarded their officers accordingly.

The level of pay wasn't a great deal higher than it has been in the past. Moreover, in terms of, say, 1939 dollars, executives actually haven't been keeping pace with other groups in industry.

Even so, this year's survey of executive compensation does contain a few out-of-the-ordinary facts. For example, it shows that for the first time top pay has jumped the \$700,000 mark-General Motors' Pres. Harlow H. Curtice got \$776-400.

A figure like this prompts some people to raise the general question: Why do companies pay their top men so much; after all, they keep a relatively small amount of it after taxes?

Even some who are high paid in any ordinary terms ask this question. And the companies that pay on outstandingly high scales are also known to have pondered over this question.

The answer is a three-part one. It involves: (1) the technical problems of establishing proper salary scales within a company as a whole; (2) the competition within industries, such as the auto industry, for the best talent; and (3) personal—emotional, you might call them—reasons.

Take the technical problem first. Experts in the field often find that the basic problem isn't how much, but how little the top executive gets. They find, for instance, that one company has been paying its top man \$90,000 a year every year since 1938. With taxes as they are now, this unchanged figure perhaps makes sense. But the \$90,000 has become the benchmark from which all other executive salaries in the company are measured. Salaries of the lower executives can be increased only

within very tight limits. The experts have a word for this: "compression."

As for a solution, the experts don't believe that this company should narrow the ratios of pay between its first, second, or third levels of management. They realize that in industry, merit and status must be rewarded chiefly by compensation. The way out is to raise the top man's pay, so that others can share larger rewards.

THEN THERE'S THE FACTOR of competition. Look to the big-paying auto companies to see how this operates. Significantly, they are able to hire, train, and keep some of the hardest-hitting executives in industry.

These companies are loaded with talent, and necessarily so, because they have lots of places where they can use talent. But this talent, on the market, can command very high pay.

TINALLY, THERE IS what some call the numbers game. It's an emotional reaction that gives an executive the desire to be recognized for his ability or status in terms of pay figures.

One executive, being hired away from a competitor, was urged to accept a \$50,000 salary, plus another \$50,000 that would be deferred and hence taxed at a lower rate later. His reply: "No, I want to be a \$100,000-a-year man."

But the hard reality of current tax rates may be gradually breaking down the emotion that prompts executives to engage in the numbers game.

There's every indication that, under pressure of the big tax bite that their executives must endure, many companies are changing their ideas of how an executive should

Arch Patton, consultant for Mc-Kinsey & Co., says he found recently that 40 of the 100 largest manufacturing companies have adopted some sort of deferred compensation system—pushing taxes on part of their executives' pay into the future. The trend is growing, not just for executives, but for all those whose big-income years are concentrated in a short period.

# In Management

#### Continental Can Moves for Top Spot In Container Field by Hazel-Atlas Merger

This week, Continental Can Co. Inc., was just one stockholders' meeting away from becoming the largest selling company in the container field—several million dollars ahead of American Can Co., long-time leader.

Gen. Lucius D. Clay, Continental chairman, and J. Harrison McNash, chairman of Hazel-Atlas Glass Co., announced plans for merging the companies, subject to Hazel-Atlas stockholder approval. Hazel-Atlas, with headquarters in Wheeling, W. Va., is the second largest manufacturer of glass containers with 12 plants.

It's no secret that Clay has been shooting for the No. 1 spot in the container field ever since he became

head of Continental Can in 1950.

Adding Hazel-Atlas' \$80-million annual sales (based on 1955 figures) to Continental's \$666-million would make a total of \$746-million—topping American Can's volume last year's figure of \$714-million.

Directors of both Continental and Hazel-Atlas have approved plans that would give the latter's stockholders 46/100 shares of Continental stock for one share of

Hazel-Atlas.

Continental's acquisition of Hazel-Atlas, latest of several under Clay's regime, would give the company a full line of containers in metal, paper, and glass. It would be the only company to blanket the entire field.

# York Corp. Stockholders to Vote On Sale of Company to Borg-Warner

Stockholders of York Corp. will meet on June 25 to decide whether to sell the company to Borg-Warner Corp. (BW-Apr.14'56,p38). York has sent out proxies explaining why management favors the move. For one thing, combination with Borg-Warner's heater and furnace business will help level out seasonal peaks in York's sales of air conditioners and refrigeration equipment. Since Borg-Warner is highly decentralized, York management will maintain its independence. Also, York will make use of Borg-Warner's wider distribution setup. The merger may mean a push to expand York's consumer air-conditioning operation.

#### Oberlin's Two-Shift, Year-Round Plan Aims at Productive College Summer

Oberlin College, in Ohio, has a plan to get year-round return on its plant investment. Faculty and students at most schools are away from early June to late September; few colleges have full-scale summer programs. Dean Blair Stewart of Oberlin proposes the student body be doubled, separated into two groups. Each group would attend school for three 11-week periods each year. While one group is on campus, the other group would pursue independent studies off campus or be on vacation. Says Stewart: "Revenues from tuition would increase 100% under this plan, and cost of operating dormitories and dining halls would be reduced because all facilities would operate 12 months a year and general overhead costs per student would be lower." Total administration and service costs would be reduced, he adds. Increased revenues could be used to raise faculty salaries, increase the number of instructors by 50%.

If the faculty approves, and the plan passes experimental tests, it could go into operation in five to 10

years

## Stockholders in Dixie Rebellion Assail Fertilizer and Gas Companies

Stockholders are kicking up a fuss against the managements of two big Southern companies—Virginia-Carolina Chemical Corp. and Alabama Gas Corp.

A proxy fight at Virginia-Carolina has reached the no-holds-barred stage. Pres. Joseph A. Howell of the fertilizer company is meeting the insurgents head on. He has enlisted the aid of the public relations firm of Selvage & Lee (BW-Apr.21'56,p108) and Georgeson & Co., proxy solicitors experienced in hot battles for management control. He has called a special stockholders meeting for July 18. Howell says the insurgent group, headed by director Rupert Zickl, has only 10% of the outstanding stock, yet wants to name six new members to the 13-man board.

Zickl says that earnings of the company (1955 sales: \$77.5-million) dropped from \$4.1-million in 1947 to \$2.4-million last year despite rising sales, and tells stockholders that Howell isn't giving them the full story on operations and is responsible for lagging profits.

At Atlanta Gas Corp., two directors—Hugh Morrow, Jr., and Lewis J. Odess, Birmingham investment bankers—have filed suit in Circuit Court to force company officials to give them a list of stockholders—a necessary item in the launching of a proxy fight. They say they want to ask stockholders whether the company should sell parts of its gas distribution system to municipalities. Chmn. J. N. Greene offers to mail to stockholders any communication Morrow and Odess want, providing it's cleared with the SEC.

#### Management Briefs

The same company may soon be making Beech-Nut chewing gum and Life Savers in 13 flavors. Beech-Nut Packing Co. and Life Savers Corp. will merge under the name Beech-Nut Life Savers, Inc.—if directors and stock-holders approve. Beech-Nut makes chewing gum, coffee, peanut butter, and baby foods, had 1955 sales of \$91-million. Life Savers makes glycerine cough drops as well as its well-known candy. Its 1955 sales: \$20.4-million.



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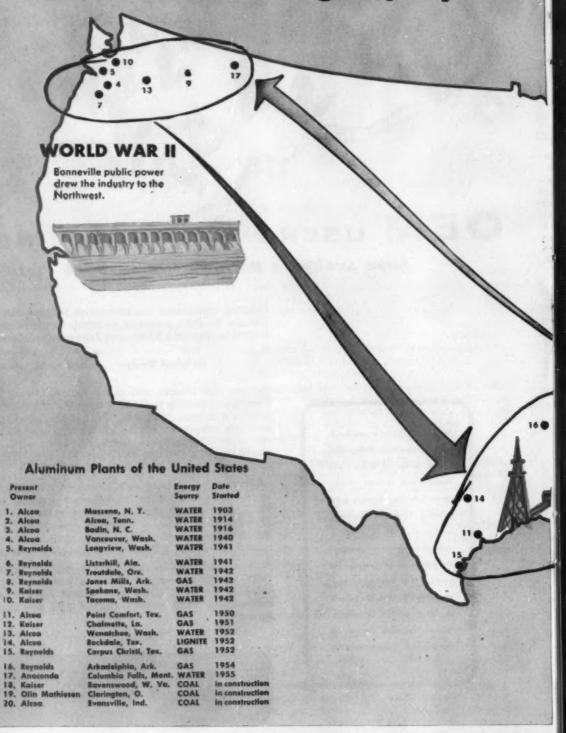
And of equal importance — every Bellows Field Engineer is fully capable of working with you and your engineers in developing the most effective and most economical way of incorporating "fluid power" control and operation into your product.

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We have prepared a new booklet showing a little of the widespread usage of Bellows Air Motors and related "fluidpower" devices in many OEM products. It makes interesting reading for the manufacturer looking for ways to increase the productive efficiency of his product. It is free on request. Write Dept. BW 656, The Bellows Co., Akron 9, Ohio. In Canada: Bellows Pneumatic Devices of Canada, Ltd., Toronto, Ontario.

# The Geography of



# Aluminum Changes Again



THE ALUMINUM INDUSTRY is in the middle of another geographic switch (map). It has thrown away its old mathematics book and has written new equations.

In the past, location of the industry has always been dictated by aluminum's gluttonous appetite for electricity. The plants were built where power was cheap—even if the markets were hundreds of miles away.

But lately, freight rates have risen faster than power costs, so freight, as it affects the trade's delicate economic balance, has come to dominate trade thinking. In line with this, the Ohio River Valley is drawing more and more aluminum plants. The valley is in the heart of aluminum's market. Its coal, through new developments, can be mined and burned more efficiently than ever. So, aluminum is turning to steam power from the valley's coal.

• The Rivals—There are other elements in the figuring, too. Hydroelectric sites, anywhere, are scarce, and politics inhibits their development. Natural gas prices have gone up, and gas is exhaustible. The aluminum maker who wants a plant to last for 50 years doesn't want to take any chance that his fuel will peter out in 20 years. Cheap atomic power is remote.

• Freight Economics—Three companies are already turning to coal power in the Ohio Valley: Aluminum Co. of America, Kaiser Aluminum & Chemical Corp., and Olin Mathieson Chemical Corp. Others—notably Reynolds Metals Co.—are likely to follow. None of these companies is closing its eyes to other possibilities, but right now Ohio Valley coal gets the call, for the plants that convert alumina into aluminum—the final stage in the aluminum—making process.

The figuring goes like this. Bauxite, the basic ore, is mostly shipped from Jamaica and Surinam to Gulf Coast plants that convert it to alumina. (These plants are not likely to move; a tariff on alumina discourages processing bauxite near the overseas mines.)

The alumina can be barged relatively cheaply up the Ohio Valley, where it is converted to aluminum. Valley plants are within 500 miles of 70% of the aluminum market, whose theoretical center is Terre Haute.

The rule of thumb for weight is 4.

BUSINESS WEEK

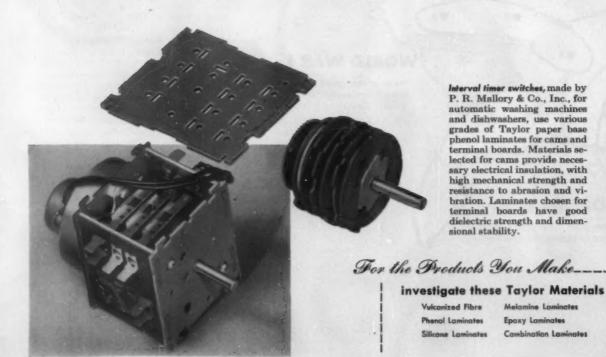


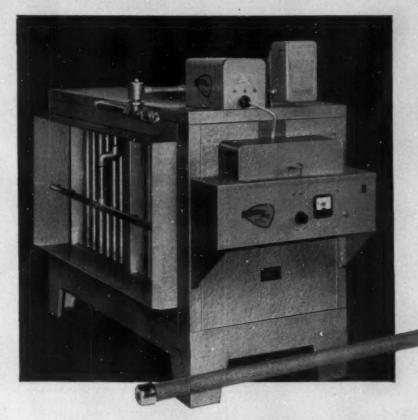
Electric blanket control, made by The Valdale Company, Inc., has an insulating back plate made of Taylor Grade 353—a quality hot-punch laminate with excellent physical and electrical properties.



Home air conditioning unit by York Corporation uses insulators in the thermostatic temperature control unit...economically machined from tubing of Taylor XX-10 laminate. This grade retains good dielectric strength after long exposure to humidity, and has good dimensional stability.

# Here's how the appliance industry





Electronic air cleaner, by Electro-Air Cleaner Co., has selenium "pencil" rectifiers made by Union Switch & Signal, using an outer tube of Taylor Grade G-5 laminated plastic. This material, a woven glass fabric bonded with a melamine resin, has excellent arcresistance, mechanical properties and low moisture absorption to meet the rigid electrical dust precipitation.

# uses Taylor materials

PEOPLE who buy appliances look for quality and utility... at a price to fit the budget. People who make appliances demand the same properties in the materials they choose for their products. Every part must be able to stand up in the tough proving ground of the American home. And it must be economical, to hold its place in a competitive market.

The leaders in the booming appliance industry find the solution to many of their materials problems in Taylor vulcanized fibre and laminated plastics. In scores of different mechanical and electrical parts, this diversified family of materials helps to make today's appliances more automatic, longer-lasting, and better in dollar value to both the manufacturer and the consumer.

The examples shown here represent just a few of the responsibilities which Taylor materials are filling in the appliance field. In addition, Taylor vulcanized fibre and laminates are used in lighting equipment, electric clocks, food mixers, vacuum cleaners, electric fans, food freezers and other products for the home. Their uses range from door hinge pads, mounting shims, thrust washers and timer cams where wearing and strength plus insulating properties are needed . . . to switches, coils and contact assemblies where electrical insulation is required.

Manufacturers find the excellent fabricating properties of Taylor materials help to hold the line on production costs without sacrificing quality. They find, too, that the large sheet size and varied forms in which these materials are supplied make for economy in utilization.

Taylor's staff of field specialists will be glad to help you choose the grade of material that matches the exact requirements of your application. You can eliminate many purchasing, stocking and manufacturing problems, too, by having Taylor fabricate finished parts to your specifications. For information, get in touch with your nearest Taylor sales engineer.

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lb. of bauxite makes 2 lb. of alumina makes 1 lb. of aluminum. The less hauling you do, the less freight you pay.

There's another potential saving in sight, by integrating some fabricating plants to the aluminum plants, and thus eliminating the cost of reheating and rehandling the metal.

#### I. Coming Home Again

Ironically, in switching to the Ohio Valley, aluminum goes back to where it came from. Pittsburgh Reduction Co., Alcoa's predecessor, first produced aluminum in Pittsburgh with gas as fuel, then switched to coal in New Kensington, Pa.

Mechanical power from the falling water of the Niagara and St. Lawrence Rivers lured Alcoa to Niagara Falls and Massena, N. Y., early in the century. But the tight power supply in upstate New York drove up prices; so Alcoa sold its Niagara power plant and closed up shop. The same cost factors are likely to prevent the aluminum producers from trying to gobble up St.

Lawrence Seaway power.

For World War I requirements,
Alcoa turned southward to the greater
power supply in Tennessee and North
Carolina. It built its own powerhouses,
years before it bought public power, in
1937, from the Tennessee Valley Authority.

• War Expansion—Public dam development in Washington and Oregon and the government's desire to speed up aluminum production for World War II pulled the industry westward, into the land of 2-mill power (2 mills per kwh.; it takes about 10 kwh. to produce 1 lb. of aluminum; TVA power costs around 4.5 mills and Ohio Valley about 3.5).

Without the government subsidy to the Northwestern power dams and the wartime emergency, the industry would have had less inducement to head that way. Except for the wartime airplane industry, the West has used relatively little of the aluminum it produces.

War's end slashed the demand for aluminum. From the 1943 peak of 920,000 tons, production dropped to 410,000 tons in 1946. Many war plants closed, especially uneconomic ones such as the 5.5-mill plant in New York City. The government sold some, leased others.

• The Southwest—Postwar civilian consumption hardly had begun to risc when Korea prompted the need for more expansion in aluminum. This time, the industry moved to the Southwest to burn natural gas. This also drew it close to domestic bauxite deposits and the tidewater ports for imported bauxite.

Reynolds had taken over a government-built war plant at Jones Mills,



# "FOAMGLAS solved our sphere insulation problem because it stays dry, stays effective"

states U.S. Industrial Chemicals Company

National Distillers Products stores anhydrous ammonia in four 55-ft. diameter spheres at their U. S. Industrial Chemicals Division plant in Tuscola, Ill. Pressure has to be controlled at 55 p.s.i. by holding temperature at 26°F. That calls for insulation that won't lose efficiency, and U.S.I. reports, "We solved the problem with FOAMGLAS."

They explain: "This cellular glass insulation isn't affected by spillage, acid atmospheres or moisture. That means we get dependable temperature control. Even under our blistering summer sun, heat gain in the spheres is only hundreds of B.t.u.'s per hour; not the usual thousands."

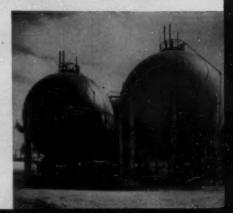
FOAMGLAS saved installation time and money for U.S.I., too. They found

that "the light, strong, rigid blocks were easy to cut, shape and handle. Best of all, the material's high insulating value made only one 3-in. layer necessary."

These benefits and more can be yours when you insulate spheres, piping, equipment or buildings with FOAMGLAS. Prove it yourself with a series of six simple tests easily performed in your own office. Write us today for a free sample and complete testing directions.

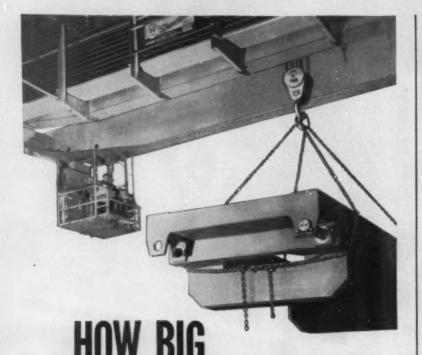
# Pittsburgh Corning Corporation

Dept. F-66, One Gateway Center Pittsburgh 22, Pennsylvania In Canada: 57 Bloor St. W., Toronto, Ontario Installing FOAMGLAS on these four U.S.I. spheres was simplified by the material's light weight and handling ease. Each block of insulation was impaled on studs weided to the sphere plates. Joints were then sealed and asphalt cutback was sprayed on as a finish. Insulation Contractor was Heat Lock Corp., Indianapolis. Ind.





ise manufacturers of PC Glass Blocks



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ability is vital in crane service. That means complete reliability in structure and function. For no crane is better than its components.

"Shaw-Box" Cranes are recognized by industry the world over for enduring stamina and operational features that assure continuous performance, all-around safety and convenient, low-cost maintenance. They are the products of an organization responsible for many innovations now accepted as standard in crane manufacture. The same vision and resources are now creating new departures in overhead load-handling equipment to meet future needs. Consequently, your purchase dollars buy plus value when you invest in a "Shaw-Box" Crane.

If your plans call for a crane to handle 500-lb. loads or 300 tons or more, Shaw-Box offers you the widest choice of standard types and capacities available anywhere. There is no need for compromise. We will gladly work with your staff or your engineering counsel to make sure you get the right crane for the job, economically. Let us know your requirements or write for Catalog 219.





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Ark., that fed diesel equipment with gas. At Rockdale, Tex., Alcoa found another fuel: lignite, low grade coal.

With two exceptions, no new water plant has been started since 1942. In one case, Alcoa found a power plant site at Wenatchee, Wash., and went into production in 1952. In the other, Anaconda Co. got into the aluminum business last year by taking over public power contracts for Hungry Horse Dam from the Harvey Machine Co. at Columbia Falls, Mont.

Harvey, which retains a 5% interest in Anaconda Aluminum Co., has had troubles lining up financing, now talks of building a reduction plant at The Dalles, Ore., based on public hydro power.

#### II. Freight Calls the Turn

All the time since Korea, aluminum has been booming. Soon, further expansion became inevitable. When it came, most of it landed in the Ohio Valley.

Kaiser was first. In February, 1955, it had announced a new sheet and foil mill for Ravenswood, W. Va., and precipitated speculation that it will build a reduction plant there as well (BW-Feb.19'55,p90). In December, the plant was announced.

Freight explained the decision. Kaiser's bauxite was made into alumina in Louisiana, shipped across country to the Northwest to be made into aluminum, rolled there, then shipped to the East to the market.

Thus a pound of metal reaching a customer traveled a good 4,500 miles.

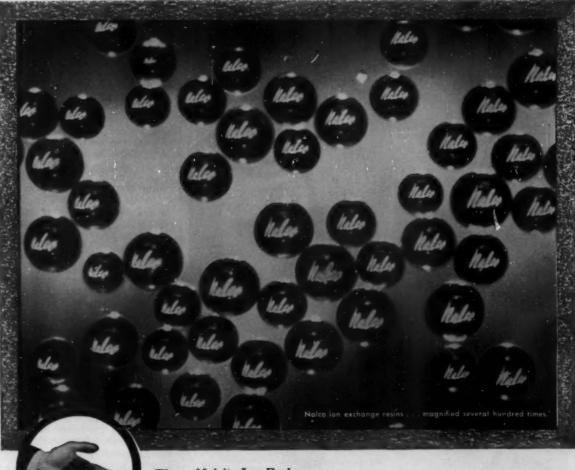
• The Ball Rolls—A month after Kaiser, Olin Mathieson announced it would become the fifth member of the U.S. aluminum industry with a plant at Clarington, Ohio, also using coal. OM's men had talked Ohio coal for months before the announcement. It was more natural for Olin Mathieson to go for coal since it supplies the mines with explosives.

Alcoa made it a threesome in April when it announced plans for building at Evansville, Ind., down the Ohio from the others.

For its 220,000-ton plant—the nation's largest—Kaiser signed a contract with Ohio Power Co., a subsidiary of American Gas & Electric Co., for 30 years, plus two 5-year options.

Olin Mathieson's 60,000-ton plant is a three-way affair with Ohio Power and Pittsburgh Consolidation Coal Co. Power facilities will consist of two 225,000-kw. units operated by Ohio Power and integrated into the American G&E system. One will be owned by Ohio Power; the other, jointly by Olin Mathieson and Pittsburgh Consolidation Coal.

In Indiana, Alcoa will build a 150,-



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There may well be a place in your operations where efficient, economical ion exchange can help you improve products, speed processing or recover valuable trace metals. Nalco will welcome an opportunity to help you explore the possibilities.

#### NATIONAL ALUMINATE CORPORATION

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CANADA: Aichem Limited, Burlington, Ontario

BRANCHES AND AFFILIATES IN SPAIN, ITALY AND WEST GERMANY

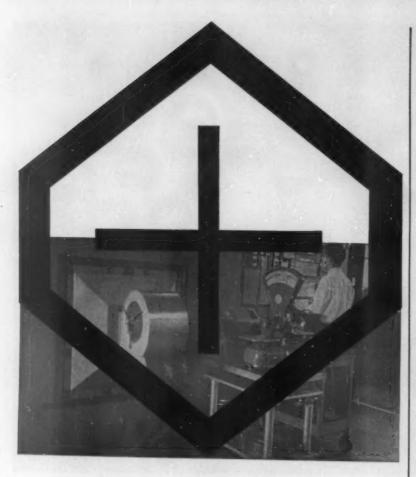
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- Separation and purification of rare earth metals not readily propored by other processes.
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CATALYSTS ... FUEL OIL STABILIZATION ... WEED AND BRUSH CONTROL ... SLIME
AND ALGAE CONTROL ... OIL WELL AND REFINERY CORROSION CONTROL ... PAPER
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Result: Half a million design variations of Torrington air-impellers contributing to the success of products valued at nearly 4 billion dollars a year!



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000-ton plant and a 375,000-kw. power plant to be operated by Southern Indiana Gas & Electric Co.

• Barge Haul—When you reason out the economics of these plants, you wonder why they weren't built earlier. Heavy dependence on imported bauxite is keeping the alumina plants near the Gulf of Mexico, but it's a barge haul for alumina to the Ohio Valley. And the haul of metal from there to independent fabricators or the producers' own plants is, mostly, an overnight trick. Thus, the 3.5-mill coal power of the valley easily competes with the 2-mill hydro power of the Northwest, saving both freight costs and time.

Arthur F. Johnson, Olin Mathieson mining engineer, may have the answer. He says, "perhaps the question of freight costs versus power costs was not always correctly evaluated."

You can piece the picture together from data picked up in conversation with Kaiser people.

• The Savings—Take sheet. Suppose Kaiser is selling it in Cleveland for 42.3¢ per lb. Before the Ravenswood plants come into being, a good guess is that freight costs 4.79¢ per lb. and power 2¢. Together, they'd make up 16% of the sales price.

The Ravenswood figures would be quite different. Freight would be down to 1.41¢ per lb. and even though power would be double to 4¢, the two together would be only 12.78% of the price.

With foil, the freight saving would be still greater: 1.49¢ a lb. from Ravenswood, against 6.72¢ from the West Coast.

Carry the Kaiser estimates further and you find the prospect even more exciting. Assume that all the Ravenswood capacity of 320-million lb. of sheet and 18.3-million lb. of foil will be sold in Cleveland—a reasonable average distance. With a freight-power savings of 1.38¢ per lb. of sheet and 3.23¢ per lb. of foil. In that case Kaiser's annual savings at Ravenswood works out to nearly \$5-million.

In addition, Kaiser will be 12 or so days closer to its customers; and when time is important, the Ohio River location could be the difference between a sale or no sale.

• If Fuel Costs Rise—Coal-based aluminum in the Ohio Valley provides many answers, but it also raises the questions of a rise in fuel costs; utilities might get offers for more money from smaller users, and the United Mine Workers might hit the mines for higher wages.

As for Kaiser, there is speculation about its contract with American G&E's Pres. Phillip Sporn (cover and page 66). Some in the industry feel sure Sporn included escalation clauses. Others suppose that Kaiser took care to obtain built-in protection; anyway, they point

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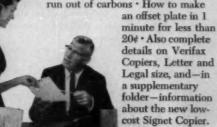
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In figuring production costs, a metal fabricator has the right to depend on good performance with the product of the strip steel supplier of his choice. To insure the performance needed to provide the best end-product cost, it sometimes pays to buy restricted specification cold rolled strip steel. Although the initial cost might be somewhat greater per ton of steel, many examples can be cited to illustrate the economy in such a practice when end-product costs are facts and not estimates.

Consider the case of the West Coast manufacturer who was purchasing coil stock (sold as cold rolled strip steel) for a forming operation where close gauge tolerance was not of greatest importance. (However, the drawing quality, because of chemistry, was not uniform and die costs and rejects were causing expensive down time and yield losses.) Switching to a CMP restricted specification strip, the manufacturer obtained a uniformity in coil after coil that eliminated these problems and provided an end product cost much below his former cost even though his initial steel costs were higher.

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cut that Kaiser has been picking up coal deposits of its own in the lower Ohio Valley.

Alcoa and Olin Mathieson have rather more known protection—Alcoa, because it owns coal and is having it mined by Peabody-Sinclair; Olin Mathieson because it has Pitt Consol as a partner.

But even though fuel costs may rise, the aluminum people seem well satisfied with their new home. They feel they are tied to the best coal, the best mines, and the best power producers.

With mines that produce 50 tons per man day—not 10 tons—the 225,000-kw. power units will be tied to the best coal mining and steam-electric generating technology that we have—probably that anybody has.

• Land of Hydro—The old dependence on water power plainly has ended. Some aluminum men go so far as to say hydro power won't be ever used again for new capacity in this country. The figuring now virtually starts with transportation—freight is that important. • Gas Costs—As for gas, some people say nothing would put rates back down

say nothing would put rates back down faster than a couple more announcements of coal-fired aluminum power. But, generally, the industry consensus is that gas is out. It's not only the price, though, that's important, but the assurance of a long-term supply.

The guessing is that if Kaiser had been able to wangle assurance of adequate gas supply from Texas—its present contract with United Gas Pipeline Co. runs to 1972—it would have been on the Gulf instead of at Ravenswood. And now Kaiser is believed ready to convert to Ohio Valley coal at its huge Chalmette (La.) plant, if gas runs out.

#### III. Rosy-Figured Dawn

Becoming more bullish about its future with each new market for aluminum, the industry is thinking in terms of additional capacity.

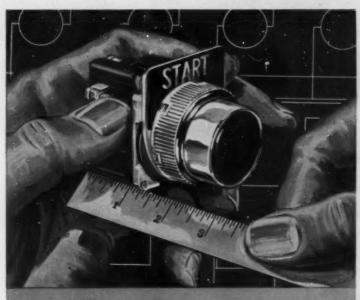
Some new potlines for making aluminum are sure to be added at present sites, simply because occasionally it is cheaper to expand at a plant that has extra room than to start anew.

Even water power-based plants won't be ruled out, as you can see from Reynolds' plans to add 100,000 tons at Listerhill, Ala. Reynolds is building there simply because it picked up a TVA power contract cheaper than Ohio coal power.

Aluminium Ltd. and its operating company, Aluminum Co. of Canada, would like to have U.S. companies tie on to hydro power in Canada. Such a move, they assume, would persuade the U.S. industry to favor reduction of U.S. tariffs on Canadian aluminum, which comes here in great quantities.

• Another Kitimat—The Canadians

### Now...for machinery designers...new heavy duty pushbutton units built to the standards of the spectacular new Cutler-Hammer Three-Star Motor Control



These are the world's smallest heavy duty pushbuttons. They require a behind-the-panel depth of only 1 3/32". This is 40% less space than needed by the next smallest units on the market. Double-pole contact blocks are exaliable in all combinations of normally open and normally

closed contacts. Each control circuit is electrically and mechanically isolated from the other. Each circuit is clearly identified and all terminals are color coded. Rapid on-the-job circuit additions are obtained by stacking contact block on contact block.



These pushbuttons may be flush type, untended type or with mushroom heads...le a wide range of colors for quick control identification. Standard, large, and jumbo size legend plates fit every type of operator and indicating light in the cetter likes.



pushbutton assembly hat eaves more than a entire cost by intallation savings. New attachment with its pushbuttons mount in minutes; no loss adjustments. Neither alignment nor spacing of units is critical. Pushbuttons will not sind or atick; always powerate perfectly.

- ☆ they install easier
- they work better
- they last longer

Design engineers are quick to recognize that these new heavy duty pushbuttons have everything. There is nothing on the market like them. They are amazingly compact to require the least back-of-panel depth. They are one-hole mounting and they are oil tight. They easily provide for as many as eight separate control circuits per pushbutton, eight completely isolated heavy duty contacts either normally open or normally closed. The buttons may be flush type, the extended type or with mushroom heads. They can be black, red, yellow, green or gray. See the new one-button control ation, C-H Roto-Push. See the easiest-to-install maintained-contact pushbutton attachment and the means for padlocking any of the standard pushbuttons. There are both knob and key operated selector switches in this complete line. Also matching indicating lights and the new automation safety light, PresTest. Be sure you have complete information now. Write today on your company letterhead for a copy of the new Cutler-Hammer Panel Builders Handbook Pub. EE-120. CUTLER-HAMMER, Inc., 1275 St. Paul Ave., Milwaukee 1, Wisconsin.





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two or three position. Positions may maintain contact or have spring return. Three standard contact blocks provide wide range of circuit combinations with the use of just a single block. Lulimited circuitry by deline blocks



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The new center opens another door on the future of packagingfor the immediate benefit of our customers and for the ultimate benefit of almost everyone.

Each Continental product division-Crown and Cork, Paper Container, Fibre Drum, and Flexible Packaging-has a research and development department of its own comparable to that of the Metal Division. Our Central Research and Development Division, also located in Chicago, does long-range experimental work for all divisions. Continental Can Company, New York 17, N. Y. Continental Can Company of Canada, Ltd., Montreal.

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think they have the answer in something like the fantastic Kitimat, B. C., project with its proposed 500,000 tons of capacity and its own power facilities. But our people say they prefer to add three plants turning out that much collectively.

Americans concede that when the cost of Kitimat is fully depreciated and it is running at full capacity, its operating costs will be the lowest on the continent. But now, with its present smaller capacity, Kitimat's operating cost is higher, quite apart from the huge interest charges.

U.S. aluminum people also say that if they have that much money appropriated for capital expenditure, they'd prefer to stick it into reduction plants, and then buy their power outside.

The Canadians, the U.S. companies, and Europeans have been scouting around South America and Africa for hydro power sites closer to bauxite sources. But, for the time being, our aluminum makers are more inclined to produce within U.S. borders—inside our tariffs—and sell in what they consider the world's best market, the U.S.

• Further Shifts—Future geographic switches within this country are hard to predict. Competitive atomic power could bring a move. So could the economic use of domestic ores and clays for processing into alumina. Research is going on in these fields—and no one will say how close we are to a substitute for imported bauxite. Since some of these domestic raw materials are found in the Northwest, it is conceivable that aluminum production there could have a new and bigger day.

#### **REGIONS BRIEFS**

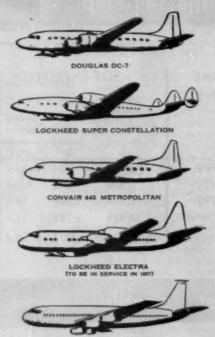
A unique twist was put in the 10-year contract between the City of Columbus, Ohio, and the Columbus Transit Co. It provides that the company's return on investment can range between 6½% and 8½%. If profits exceed the maximum, the 15¢ fare must be dropped; if profits are below the minimum, fares can be raised.

The chemical industry along the lower Mississippi River got a new recruit: Dow Chemical Co. announced it would build a \$20-million plant near Plaquemine, La.—14 miles south of Baton Rouge—to make caustic soda, chlorine, and other organic chemicals.

An experiment to speed up traffic flow in mid-Manhattan began last week. The plan, which outlaws standing of all vehicles on one side of the street in a 54-square-block area, got off to a successful start with few violations.



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# For Americans Today

At income levels below \$7,500, savings are trivial. Only the self-employed save heavily.

Income and savings of U.S. urban families by income groups in 1950

INCOME (After taxes)	SELF-EMPLOYED Average			ALL OTHERS Average			TOTAL		
	Income (\$1	Saving (\$)	Saving- Income ratio (%)	Income (\$)	Saving (\$)	Saving- Income ratio (%)	Income (\$)	Saving (\$)	Saving- Income ratio (%)
\$ 0 - 3,999	2,112	- 706	-33.4	2,311	- 149	- 6.5	2,295	- 193	- 8.4
\$4,000 - 7,499	5,508	293	5.3	5,240	190	3.6	5,268	201	3.8
\$7,500 - 9,999	8,417	1,369	16.3	8,426	933	11.1	8,423	1,042	12.4
\$10,000 and over	17,826	6,382	35.8	14,592	2,730	18.7	15,877	4,180	26.3
All	6,270	905	14.4	3,887	90	2.3	4,147	179	4.3

Data: Bureau of Labor Statistics and

### Most people spend what they get - and

How urban families divided up their

	11000	Furnishings							
Income	Food	Clothing	Trans- portation	Housing	& Equip- ment	Household Operation	Fuel	Medical Care	
and the state	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
\$ 0 - 999	34.6	6.3	7.2	18.7	4.3	5.0	7.4	7.1	
\$1,000 - 1,999	36.3	9.2	7.9	15.7	5.0	4.6	6.1	5,4	
\$2,000 - 2,999	34.7	10.2	10.9	12.8	6.4	4,1	4.8	5.3	
\$3,000 - 3,999	32.8	10.8	13.3	11.5	6.6	4.1	4.3	5.5	
\$4,000 - 4,999	31.0	11.4	14.3	10.9	7.4	4.2	4.0	5.1	
\$5,000 - 5,999	30.2	12.3	15.5	10.2	7.2	4.5	3.7	4.8	
\$6,000 - 7,499	29.1	12.8	15.6	10.3	7.2	4.6	3.5	5.0	
\$7,500 - 9,999	28.9	13.5	15.5	9.9	6.4	5.4	3.4	5,2	
\$10,000 and over	24.6	14.2	12.7	10.7	8.3	8.8	2.8	4.2	
E 10 10 10 10 10 10 10									

# - Money Is to Spend

### Result: Most savings are held by self-employed

Percentage of aggregate income and savings, U.S. urban, 1950

	AGGREGATE INCOME	AGGREGATE SAVING		
	(%)	(%)		
Self-employed	16.5	55.1		
All others	83.5	44.9		
Total	100.0	100.0		

Wharton School of Finance & Commerce.

#### on this pattern:

total spending on goods and services in 1950

Personal Recre- Care ation		*Miscel- laneous	Total	
(%)	(%)	6%1	(%)	
3.4	1.3	2.7	100.0	
3.7	2,0	1.6	100.0	
4.7	2.1	1.4	100.0	
5.7	2.0	1.1	100.0	
6.3	1.9	1.2	100.0	
6.3	1.7	1.4	100.0	
6.9	1.6	1.4	100.0	
6.9	1.5	1.3	100.0	
7.9	1.0	2,9	100.0	
	3.4 3.7 4.7 5.7 6.3 6.3 6.9	ation Tobacco  (%) (%)  3.4 1.3  3.7 2.0  4.7 2.1  5.7 2.0  6.3 1.9  6.3 1.7  6.9 1.6  6.9 1.5  7.9 1.0	ation     Tobacco     Ianeous       (%)     (%)     (%)       3.4     1.3     2.7       3.7     2.0     1.6       4.7     2.1     1.4       5.7     2.0     1.1       6.3     1.9     1.2       6.3     1.7     1.4       6.9     1.6     1.4       6.9     1.5     1.3	

The American consumer in the mid-20th Century has one dominant trait: He spends practically everything he makes.

It isn't because he has to, in order to keep body and soul together in bare subsistance. It's because he wants toand because he feels safe in doing so. His propensity for spending money as fast as he makes it is a product of the economy in which he lives-and, in turn, is the feature of his life that is of the greatest significance to the economy. · Danger In Thrift-The consumer's enormous outlays on goods and services are pumping a stream of money back through business and industry at the rate of \$277-billion a year. The economy relies on this life stream. In theory, though, the consumer-his basic wants long since gratified-could at any time cut back his spending and sock his money away like a French peasant.

If the consumer should do this, he would scare the life out of businessmen and economists. Business would stop expanding; the economy would wallow.

However, it doesn't seem likely that the average consumer intends to do any such thing. He seems to prefer living just barely within his means. This may be profligate and shortsighted of him, in some people's eyes, but it is a powerful stimulus to the economy.

#### Savers and Overspenders

The table at the left sums up the situation. It shows how little money is saved by the great band of middle-income families, those with \$4,000 to \$7,500 of income after taxes. These families receive nearly 45% of the spendable income of the nation butnot counting the self-employed earners among them—they saved a mere 3.6% of disposable income in 1950.

Moreover, the group below \$4,000 income after taxes, which accounts for another 30% or so of disposable income, actually spends more over-all than it takes in. This is largely because so many older, retired people in this income bracket are living principally on their earlier savings, pensions and the

Unsurprisingly, the well-to-do above \$7,500 income after taxes save a fairly high percentage of earnings, the percentage increasing as the income increases.

However—and this is most significant—the only real group of savers at all levels of income are the self-employed,

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#### Selling to an Age of Plenty

Starts on page 66

the entrepreneurs. For these people, saving is an essential working tool, an investment in the future of their enterprises. For this special reason, they account for more than half of all personal savings (table, page 105).

#### Pioneering Study

Data for the tables on pages 104 and 105 come from the most revealing and exhaustive collection of statistics yet made in the consumer saving and spending field. The raw figures are drawn from a monumental sampling of urban families by the Bureau of Labor Statistics in 1950. The University of Pennsylvania's Wharton School of Finance & Commerce has just published the first volumes of a study based on those figures (box, below).

Of course, the use of 1950 data raises a question: Are the statistics still valid in 1956? The answer seems to be yes—the major postwar trends in consumption had already shown up by 1950. Dr. Irwin Friend, director of the Wharton

School project, checked the material against total consumption expenditure for the past few years and found only small changes in pattern.

• Range of Comparison—The mining of this rich vein of statistical gold brings up the problem of how much the relationship between savings and consumption has changed in the long run. It's a problem because studies prior to .1950 were few and incomplete. The only comparison must be with studies such as that made in the mid-1930s by the Dept. of Labor and the Works Progress Administration, which deals with family expenditures in selected cities.

The crucial question is whether consumption has risen over the years as a percentage of income. If so, how much? And what kind of trend can we expect for the future?

Despite the poverty of long-range comparisons, economists generally assume that sometime after 1900 a series of major, permanent changes began to take place in consumption patterns: The percentage of income devoted to consumption moved up to a new plateau.

The reasons for this upward movement are complex, wrapped up with the nature of society in changing times. In any case, it is certain that the temperament of today is to seek a higher stand-

### Opening Up a Gold Mine

THE DATA for the tables in this report to executives come from the greatest stockpile of statistics regarding the U.S. consumer ever to be collected. It was assembled in 1950 and 1951 when the Bureau of Labor Statistics overhauled its cost-of-living index to take into account the changes that had occurred in the American standard of living since the prewar period. To get its data, BLS interviewed no less than 12,500 urban families in 91 cities and towns, asked detailed questions on some 1,500 items of budget information.

BLS got what it wanted from the survey—the new series of the c-of-l index—and found that it had a great mass of figures left over. Then the Ford Foundation was prevailed upon to put \$500,000 into running it through the electronic computers and putting it into usable form. The mentor of this project is Dr. Irwin Friend, of the Univ. of Pennsylvania's Wharton School of Finance & Commerce. Friend, one of the country's foremost authorities on moneyflows, has had the help of a long list of distinguished economists from busi-

ness, government, and universities.

This week the first volumes of the monumental Consumers Expenditures Study were published. These are the basic tabulations— 8,000 pages of them in all. By fall, 18 volumes of figures will have been published.

Here is the American consumer under a microscope, classified and cross-classified—by income, family size, age of family head, race, occupation, and other characteristics. Here are the details on what he saves and what he spends, and how he spends it on all major goods and services that people purchase.

Next year a second set of publications will begin appearing. These will be research studies on the economic and social aspects of consumption and savings patterns. They will be written by staff members of Wharton and other schools, who will tackle such subjects as:

• The relation of savings to consumption, with a look at such things as the effect of the National Service Life Insurance dividend in 1950 (was it saved or spent?).

• The consumption patterns of manual workers, Negroes, aged.

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**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

ard of living right now, rather than to defer comforts and luxuries for one's old age or to endow a future generation with security.

#### The Entrepreneur

The single exception to this pattern of "live now, pay later"-the selfemployed group-serves to throw the general attitude into sharp relief.

The self-employed, the entrepreneurs, are in a sense a remnant from an earlier stage in the development of capitalism, when money meant something different from what it does today. To put it another way, they alone still look on money in its classic meaning, while the rest of us, mostly wage or salary earners, have a new and different view.

· Hard Money, Soft Money-In the older view, money was something quite literally hard and tangible, something to put away for a rainy day or for a quiet old age, something to invest and to beget more money, which in turn would produce more power, higher social caste,

a larger estate.

Money was respected for its own sake as a working tool. It was capital to be held inviolate, so that it could go on bearing fruit. A prudent man of means would no more sell off his 6% bonds to live on the capital than a carpenter would sell his tools to buy a Model T. An economics professor is fond of telling his classes a childhood memory of a townsman who drew whispers as he walked down the street: "He dipped into his capital."

It would be an exaggeration to say that money has lost all these connotations, but they have certainly been softened and diluted-by the transfer of responsibilities for health and old age to the welfare state and to welfare industry, by the disappearance of gold from circulation, by the progressive income tax, and by drastic changes in the way we acquire our money. In the employee society of today, money is to spend. It is something that will buy a higher standard of living-right now.

#### Why the Change?

The new attitude toward money comes from several recognizable changes in our recent history.

For one thing, the entrepreneursfarmers, storekeepers, operators of small family businesses-are playing a shrinking role in our economy. They are dwindling as a percentage of income earners. Big businesses swallow up the individual operators. Urbanization has



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#### Selling to an Age of Plenty

Starts on page 66

been a large factor, too. The farmer, large or small, is an entrepreneur; his numbers are diminishing. In 1920, about 30% of the population lived on farms; today, it's down to 13% (BW-Dec.10'55,p106). The movement from rural living to the city has accelerated as farm income has dropped.

Then, too, savings-in the usual sense of the word-are less important than they were. Public and private plans provide relative security against the worst disasters. Pension plans and social security lessen the urgency of one classic reason for saving: providing for old age and for an estate. Medical and hospitalization plans and new and broader forms of insurance guard against family emergencies. Supple-mentary unemployment benefits are a step further in this direction.

And the mere fact that we have had prosperity for 15 years has given people a greater sense of security-hence, a les-

sened urge to save.

New Times, New Ways—Other social and economic changes have also had a bearing on people's saving and spending habits. A decreasing percentage of foreign-born in the population means fewer people with Old World attitudes. Young people are marrying and having children at a much earlier average age than a few generations ago-so they have less time to save up for these occasions even if they want to. The prevalence of easy installment credit has greatly encouraged the tendency to buy first, then save.

Perhaps the most important factor of all has been the role of innovationsof new products-in enlarging the range of goods on which people can spend their money. These innovations, when widely distributed, become part of a higher general standard of living on which people, in turn, tend to spend a greater portion of their income.

#### What Do Savings Mean?

In the long sweep of time, it's quite clear that Americans are pushing toward a higher standard of living. With variout sociological forces also at work, this should mean a long-range increase in percentage of income devoted to spending for consumption. Yet, in the past few years, it has been the savings rate instead that has been high and has threatened to go higher.

Right after the war, personal savings ran about 4% of disposable income. In 1950-51, it broke away from this level, topped the 1929 rate of 5%, and went on up to 7.8% in 1952. Since then, its

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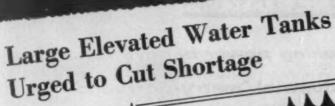
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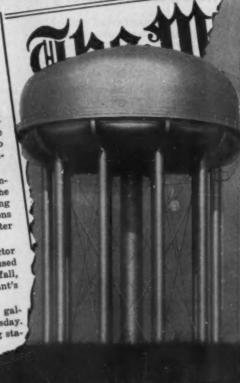
Engineer's Plan Bared

Plans were advanced here Friday for new 3,000,000 gallon elevated water storage tanks that could be used to ease the load at the two municipal water plants.

This city's consulting engineer told city officials the tanks could be filled during normal pumping conditions and put into use when water shortages occur.

The city's utilities director said water demands, caused by lack of sufficient rainfall, continued to exceed the plant's rated capacities.

A total of 26,050,000 gallons was pumped Thursday. Capacity of the pumping station is 22,000,000.



Peak load periods of water demand, especially in the summertime with lawn and garden sprinkling, are dropping distribution pressures to dangerous levels in many cities, towns and suburbs throughout the country. If this is your community's problem, a Horton® elevated tank can solve it... by storing a reserve of water that flows by dependable gravity pressure to meet peak load periods, reduce pressure variations and increase pressures in the overall distribution system.

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**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

lowest point has been 6.3%, last year. This is still high for either prewar or postwar times.

Since each shift of percentage point between spending and saving can mean a difference of \$2.5-billion in the nation's expenditure on goods and services, it is no wonder that businessmen and economists have been nervous about the personal savings rise.

 Key to a Paradox—The savings rate increase may be short-range, thus no flat contradiction of the theoretical upward pressure on consumption. Nevertheless, it has been hard to reconcile the two factors. Now the Wharton study lends strength to an explanation that economists have suspected for some time:

 The personal savings figure is inaccurate—because of statistical crudity and false information from income earners.

 Much of the so-called savings isn't at all what people usually think of as savings; some of it finds its way actually into consumption, and a lot of it was never available for consumption expenditures in the first place.

• Crude Figure—There's a technical flaw in the personal savings figure itself. It is a crude statistic, which the Commerce Dept. arrives at by simply subtracting consumption expenditures from disposable income. This leaves all sorts of things to be counted as savings: payments on insurance with no cash value as well as insurance that builds up savings, money you lose on the street, etc.

In an era of popularity for installment buying, this leads to anomalies. If you buy a refrigerator for cash, it counts as consumption; if you buy it on the installment plan, your monthly payments count as savings—after all, if you had saved up before hand, it would have been savings. The point is that savings as estimated by the Commerce Dept. is likely to be very different from what the ordinary businessman takes the word to mean.

• New Light—This is one area where the Wharton study, with its information on who saves what, casts welcome light. It shows, for example, that the major erratic element in the savings picture may be the 55% held in 1950 by entrepreneurs.

Dr. Friend thinks the savings rate reported by the self-employed in the special 1950 survey may be high, because this group tends to under-report earnings—with one eye on the income tax collector—while honestly reporting



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Front end of shuttle car, on way to dump, showing U.S. Laytex Royal Master Cable leading out from front. Surroundings are rugged.



U. S. Laytex Royal Master Cable leads to main power supply, and is constantly being yanked over the sharp surfaces.



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"We give cable a battering punishment... our production quotas have no use for weaklings,"

ays super of Truax-Traer Coal Co.

This coal mine (in West Virginia) uses U. S. Laytex Royal Master Portable Cables on its cutting and loading machines, and on its shuttle cars. "We don't make a policy of abusing equipment," says the superintendent, "but our production quota really puts the heat on U. S. Royal Master Cables. We pull them along rough facings; in an 8-hour shift, a buggy will pay out or take up the cable as often as 80 times."

The cables are constantly under tension resulting in pres-

sures as high as 600 lbs. per square inch, and must take continual jerking. The officials of the mine are impressed by U. S. Royal Master's superior performance. One of them says, "We can't afford to baby cable. Anything that slows down getting out coal has no place on our wanted list."

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#### Giant press gives 50,000-ton hug

Huge as the press appears, you see less than half of it, for a large part is hidden beneath the floor level.

Loewy-Hydropress, Inc., a division of Baldwin-Lima-Hamilton Corp., designed and built it under the U. S. Air Force Heavy Press Program. It is at work in the Wyman-Gordon plant near Worcester, Mass.

In one mighty 50,000-ton squeeze, equivalent to the weight of a battleship,

this production Gargantua can forge an entire airplane wing spar. There are many advantages in making a wing spar, or any plane component, in this way. The product is better. The pressed part, in one piece, replaces many separate pieces, saving the man-hours needed to fabricate and assemble them, as well as the rivets that would be needed to bond them together.

Most spectacular parts of this me-

chanical giant are the columns through, which the 50,000-ton pressure is exerted. Bethlehem forging crews made the eighteen steel sections for the columns in the forge shop at the Bethlehem, Pa., plant.

They were the longest forgings ever made, measuring 108 feet overall, each one patiently elongated and forged to size into a column from a cylindrical 275-ton steel ingot.

BETHLEHEM STEEL

## In Spending:

## Uniformity - with some differences

How urban families in the \$4,000-7,499 income group divided up their total spending on goods and services

#### LARGE CITY VS. SMALL

	Large Cities (%)	Suburbs of Large Cities (%)	Small Cities (%)
Food and Beverages	30.7	29.9	29.8
Tobacco	1.8	1.6	1.7
Housing	10.8	10.4	10.1
Fuel, etc.	3.5	4.0	4,4
Household Operation	4.3	4.3	4.6
Furnishings & Equipment	6.9	7.4	7.9
Clothing	12.3	11.7	11.7
Transportation	14.6	15.8	15.3
Medical Care	5.0	5.0	5.0
Personal Care	2.2	2.1	2.1
Recreation	6.6	6.4	6.0
Miscellaneous	1.3	1.4	1.4
	100.0	100.0	100.0

#### SIZE OF FAMILY

	Two Person Families	Four Person Families
Food and Beverages	29.2	31.9
Tobacco	1.9	1.8
Housing	12.2	9.9
Fuel, etc.	2.9	3.8
Household Operation	4.7	3.8
Furnishings & Equipment	8.0	6.6
Clothing	11.0	13.5
Transportation	16.2	13.2
Medical Care	4.9	5.1
Personal Care	2.2	2.2
Recreation	5.9	7.1
Miscellaneous	.9	1.1
	100.0	100.0

#### AGE

	35-45 Years (%)	65-75 Years (%)
Food and Beverages	31.8	32.6
Tobacco	1.9	1.9
Housing	= 11.0	9.7
Fuel, etc.	3.6	4.5
Household Operation	4.2	4.5
Furnishings & Equipment	7.3	5.3
Clothing	12.5	11.0
Transportation	13.1	14.8
Medical Care	= 4.6	6.4
Personal Care	2.3	2.3
Recreation	6.6	5.7
Miscellaneous	1.0	1.3
	300.0	100.0

#### RACE

	White (%)	Non-white (%)
Food and Beverages	31.6	29.7
Tobacco	1.9	2.0
Housing	10.7	10.9
Fuel, etc.	3.6	3.5
Household Operation	4.1	4.3
Furnishings & Equipment	6.9	7.3
Clothing	12.4	14.4
Transportation	13.7	14.7
Medical Care	5.0	3.5
Personal Care	2.2	2.8
Recreation	6.7	6.2
Miscellaneous	1.2	.8
	100.0	100.0

savings. Thus, savings may become a higher percentage of income than a true rate.

Then, too, real fluctuations in the savings of the entrepreneurial group would not necessarily mean that money was being withheld from consumption

spending. Only a small portion of this money is available for consumption expenditure anyway—most of it is earmarked for investment, for plowing back into business as working capital.

The Wharton-BLS study shows clearly that the self-employed have a

far greater propensity to save than other groups do. And their average income is high, according to last year's study of consumer finances by the University of Michigan for the Federal Reserve Board—74% are in the bracket of \$4,000-and-up in after-tax income, com-



National Food Stores are typical of the many industrial and retail firms who are saving as much as \$100 a ton on large scale air conditioning by installing UsAIRco central station RK units.

Since 1954, National Food Stores have installed UsAIRco RK units in 30 Detroit-area stores. Twelve more units to be constructed in 1956 will also have these units.

The usAIRco RK (capacities from 10 to 60 tons) is a complete air conditioning plant, encased in a single cabinet. It is shipped, balanced and tested, from the factory, ready for immediate use. Installation is simple, with only three connections necessary: to ducts, power and water supply. A built-in evaporative condenser saves 95% of water consumption costs and eliminates the need for cooling towers.

National Food Stores chose USAIRCO RK in preference to built-up systems because of its economy of installation and maintenance, reports W. E. Larson, head of store maintenance and construction. Larson estimates that for every 40-ton RK unit installed, savings are approximately \$4,000 to \$4,500. This includes the complete air conditioning job... equipment, labor and materials.

Every new National Food Store in this area is planned with a special equipment room in the rear for installation of the RK unit. Removable panel walls of this room leave the equipment readily available for servicing.

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## UNITED STATES AIR CONDITIONING CORPORATION

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**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

pared with 81% of management and 59% of skilled labor. But the self-employed have only 16% of spending power in the urban areas covered by the Wharton-BLS study.

 Kind of Savings—The Wharton study finds another factor revealed by the BLS figures: the nature of the average

consumer's savings.

The broad middle-income class not only saves little but what little it saves is chiefly in the form of institutional savings-payments on mortgages and insurance—as contrasted with liquid savings such as money in the bank. The University of Michigan studies have borne out this point, too. The significance is that the typical middle-income family's savings, small as they are, tend also to be locked up rather tightly, not readily to be shifted at will.

 Reassuring—In the over-all view, therefore, there has probably been more nervousness about the fluctuations of the savings rate than the facts warrant. In their preoccupation with the rise of the savings rate, the sellers of goods and services have neglected to take appropriate notice of the remarkable stability of the postwar consumption pattern.

From 1947 through 1955, total disposable income rose \$100-billion while consumption expenditures rose \$87-billion. In other words, for every 10% rise in income we had an 8.7% rise in consumer spending. Actually, though, there were only three years out of the eight—1948, 1950, and 1951—when the percentage increase in spending fell behind the increase in income; in three other years, including last year, new spending even outran new income.

Short-range cycles of spending and saving we undoubtedly have. The Michigan studies isolate some of the factors: consumers' expectations about income, prices, the state of the economy as a whole, as well as the level of consumer debt and the pay-back cycle. But there's no reason to expect that the country is undergoing any fundamental change in the ratio of total new income to new money going into consumption of goods and services. Nor is there any reason to expect any basic change, in the near future, in the way the consumer has been distributing his expenditures over the array of things offered to him (table, page 104).

#### I. Pattern of Spending

Just as the consumer of the mid-20th Century is dominated by a desire to spend virtually all his income, so is he driven in spending it by a desire to buy

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#### Selling to an Age of Plenty

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just what everyone else buys. Uniformity is the main feature of the spend-

ing patterns.

Over the past few decades, the old differences among the buying habits of economic and social groups have, with a few notable exceptions, faded away. The biggest gap, that between the way of life of the very rich and the very poor, has been narrowed sharply within the memory of everyone who's over 30.

Even more telling is the disappearance of differences within the income groups themselves—between races, different sections of the country, age groups, various occupations, sizes of family, big city and small town (tables,

page 115).

 Class Behavior—Of course, not all differences have been wiped out—you can still see them every day. But, by and large, the differences are significant only when you are comparing the broadest social groupings with one another.

If you break the nonfarm population into three social groups, disregarding shades of economic condition, you find (1) the self-employed entrepreneurs, (2) the white-collar or salaried people, (3) the wage-earning manual workers. In behavior toward savings, you find the entrepreneurs behaving one way, the other two groups the other way. The lineup is different when it comes to patterns of spending.

Thus, the Wharton study reveals, the entrepreneurs and the white-collar class follow the same standards and patterns in spending, while the manual workers go their own, slightly different

course.

 The Pressures of Conformity—Overall, though, American buying patterns tend toward uniformity, toward the same kind of standardization as saving, habits show. This is the result of some of the same conditions:

The urbanization of the country, which has turned us from essentially a nation of producers to a nation

of consumers.

 The leveling of family size fewer very large families with eight or more children, particularly among the poor; fewer families with no children or only one child; many, many more families with three or four children.

 The redistribution of income that has bulged the middle-income group, compressing an enormous part of the population into this one band of income.

#### **Great Levelers**

The Wharton study finds two

dramatic and somewhat unexpected signs of the leveling process.

One is that there's no marked difference in a family's earnings per capita whether it gets its living by clerical work, manual labor, or self-employment. This reflects the standardization of family sizes and incomes at all social and economic levels.

The other finding has to do with earnings per worker (table, page 133)—differences among family incomes in the middle class are due not so much to the earnings of the head of the family as to how many breadwinners

each family has.

In short, it is typical of American families in mid-century that they achieve a higher standard of living through the number of workers in the family group rather than through the earning ability of Father. As family income nearly doubles from \$4,000 to \$7,500 after taxes, for example, the average income per worker—particularly in the manual labor group—rises at

nothing like this rate.

• Working Wives—Mother, of course, is a big factor in the family's earning power these days. University of Michigan studies for the Federal Reserve Board show that about 20% of wives work. Interestingly enough, the bracket of \$5,000 to \$10,000 of after-tax family income contains the greatest number of working wives—or else the wives' earnings push the families into this bracket. In this group, 37% of the wives go out to work, compared with 8% in the under \$3,000 bracket, 20% in the \$3,000 to \$5,000 group, and 9% in the over-\$10,000 group.

These statistics give no clue as to the number of families in which other members—sons, daughters, other kin—also work and contribute to the common exchequer, though the number is un-

doubtedly large.

• Difference It Makes—The fact that a typical family moves up the income ladder by adding breadwinners rather than by major improvement in the pay and prestige of the head of the household makes a significant difference in spending habits. A family whose income goes from \$5,000 to \$10,000 tends to live, not like a \$10,000-a-year man but like two \$5,000-a-year men.

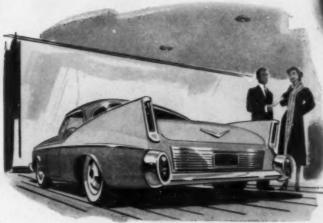
This could be another strong reason for the homogeneity of tastes, attitudes, and buying habits among the broad

middle-income group.

• All One Country-Long-established variations in spending patterns among regions of the U.S. undoubtedly persist, but presumably to a lesser degree than, say, before the war. People in the North tend to spend a little more on food, housing, and fuel than people in other regions. But even these differences are not great: Northern families in the \$4,000-\$7,000 range

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Special Report

#### Selling to an Age of Plenty

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spend 31% of their goods-and-services outlay on food, while Southern families spend 29.5% and Western families spend 29.3%.

On the other hand, Western families spend less on clothing than the others, and more on transportation-reflecting a high rate of automobile

ownership, longer distances to travel, less public transit.

Spending habits also differ somewhat between big-city and small-town families. Most notable, in the traditional pattern, families in small towns spend less on food; they also tend to spend less on housing and recreation, and more on fuel, home furnishings, and transportation. Their food saving doubtless stems from their gardening, their nearness to farms, the infrequence of their dining out.

• Other Groupings—Statistics on other groupings of the population have not been worked up for the country as a whole, but those from northern cities (table, page 115) show a few differences

from group to group:

White and non-white. Non-whites spend relatively more on clothing, less on medical care, personal insurance, and education.

Age groups. Older people spend relatively less on clothing, more on transportation and medical care.

Size of family. Larger families spend relatively more on food, recreation, and education, and less on housing.

#### Amending Engel's Laws

In the mass, consumers tend to follow-in greater or lesser degree—the classic laws of consumption as their income rises. These dogmas are known as Engel's Laws, after the German statistician, Ernst Engel, who drew his conclusions from a study of family budgets of Belgian workers a century ago. With some updating, they have been marketers' gospel for many years.

They show that, as income rises:

• The percentage spent on food decreases:

 That spent on housing, fuel, and utilities remains about the same;

 And the percentage spent on clothing, transportation, recreation, health, education, and savings increases.

One of the amendments made by Engel's latter-day disciples is the reference to percentage spent on clothing. Engel originally meant his laws as a general description of what happens when a family moves out of poverty, where almost all of its income goes for bare necessities, into modest

#### CORPORATE YARDSTICKS

-factors which contribute to corporate strength, as cited by leading educators



Dr. Thomas L. Norton is Dean of the School of Commerce, Accounts and Finance, New York University. He was Chairman of the National War Labor Board, Region II, 1944-45, is past-president of the American Association of Collegiate Schools of Business and a director of Loew's Theatres.

He says: "There is a constant need for replenishing the supply of executive manpower in any business enterprise. The extent to which management has a well-considered plan for the selection and development of its executive personnel is an important corporate yardstick."

The eight divisions and one wholly owned subsidiary which comprise American Machine and Metals, Inc., produce many different types of machines, instruments and equipment essential to a very broad segment of industry. This diversification of products and markets, together with sound, progressive leadership, has been responsible for the steady, healthy growth of the company.

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**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

affluence where it has some choice about its spending. Engel reckoned that such a family would continue to spend about the same percentage of income on clothing; the new school of economists figures the percentage would rise.

• Obeying the Law-If you look at consumers in the mass, you find that Engel's amended laws work pretty well today. As total disposable income rises, the major items of expenditure behave much as the rules dictate: Percentage spent on food goes down, clothing goes up, transportation goes up. And, of course, more goes into savings.

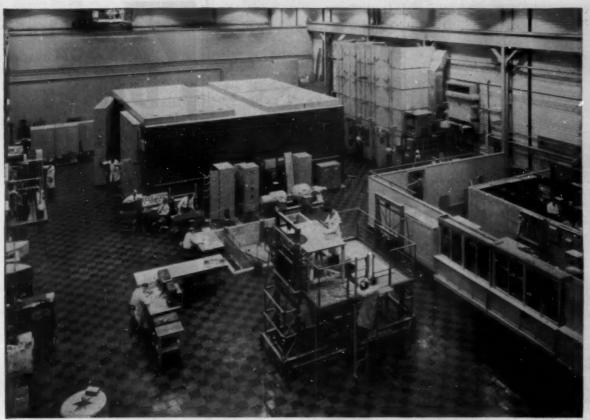
One mild exception: Housing, which is supposed to remain unchanged as a percentage of total spending, takes a steadily smaller share as income rises to about the level of \$3,000 after taxes. However, it levels off after that, so the law of Engel still acts as a fairly good predictor.

• Violating the Law-Like most economic laws, those of Engel reveal fatal flaws when applied to specific circumstances. They assume, for example, that when people climb up the income scale they take on the characteristics of the income class that they have just attained. Over-all, this is a fair picture of what happens. But narrow the view, and you find it doesn't work at all in that big cross-section of the population—the manual workers.

In broadest terms, Americans have the "social mobility" to move easily up the social and economic scale; the ease of entry to higher education from any social-economic level is just one of many examples. They also have the physical mobility to move around the country as Europeans would never dream of doing; this transience blurs the social distinctions that are sharply defined and conspicuous in older, settled regions. And mass advertising and mass distribution have at once broadened the array of goods available to all people and narrowed the gulf between extremes of quality and taste of the rich and the poor.

In any terms but the broadest, though, the buying patterns of the manual worker group stand out as an exception, as a fugitive from the modern mold. This group includes skilled wage-earners, including craftsmen and foremen; semi-skilled workers, including machine operators; unskilled workers, including domestic help and laborates.

• Mavericks-It is a curious and provocative point that here is a second



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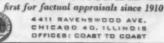
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#### Selling to an Age of Plenty

Starts on page 66

major group of people who refuse to fall in with the rest of the crowd. The entrepreneurs won't save like everyone else; the manual workers won't spend like everyone else.

Food expenditures offer a good example of how the manual workers retain the spending characteristics of lower-income ranks as they climb up in the middle incomes. According to the classic laws, as their income rises they should spend a lesser proportion of their budget on food. This doesn't happen in the middle-income bracket. Under \$4,000 after-tax income, the percentage devoted to food goes down as predicted; however, at the \$10,000 level, the percentage (about 30%) is still

about the same as at \$4,000.

In percentage of income devoted to housing, middle-income manual workers again deviate from the pattern for the whole. They spend well below the average for the self-employed and the white-collar groups (7.7% vs. about 10% in the \$7,500-\$10,000 band). In spending for household operation, they fall still further below the average (3% vs. 6% for the other two groups in the same \$7,500-\$10,000 bracket). However, in transportation (which means largely car ownership) they markedly outspend the other middle-income groups (18% vs. 15% in \$7,500-\$10,000 bracket).

· And Here's Why-Some of these divergences are easily explained, when you have the figures in front of you; others are harder to pin down, except

by social theorizing.

In outlay for food, for example, it's understandable that, up to a point, manual workers would at various income levels spend more of their budget on food than their opposite numbers in white-collar or entrepreneurial fields. They have larger families, need more food than sedentary workers. They also have a greater number of wage-earners per family, which pushes them up the income ladder faster.

On the other hand, these families eat less frequently in restaurants, where their food would cost more than at home. And it is hard to explain why they go on spending about the same percentage on food with almost no regard for how high their income goes. Evidently some cultural patterns are at work when manual workers' food spending goes so far beyond predictable

· Status Symbols-Certainly, cultural patterns affect manual workers' unorthodox rates of spending on housing, household operation, and transportation. It's pretty clear that a house and its furnishings and way of life are ex-



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tremely important to the self-employed and the white-collar groups, who upgrade this kind of spending as their income rises. It is equally clear that for manual workers the automobile is the equivalent medium of prestige. The fact that these people don't appear to upgrade housing and living conditions as readily as other groups also suggests somewhat less mobility among Americans than is commonly supposed.

In any case, whatever the reason, the American worker's refusal in 1950 to respond to a rise in income the way a Belgian worker did in 1853 has important consequences, for the manual worker group makes up roughly one-third of the total U.S. work force.

#### II. Where Industries Hurt

In the light of all this, it is hardly surprising that the U.S.—as a nation—also refused in the prosperous 1950s to conform to patterns set by Belgian workers in the straitened 1850s. Whatever may be the uses of adversity, they're certainly not those of prosperity

and plenty.

The point at which Engel's Laws really begin to fall apart is when they are used to predict consumption patterns for the nation as a whole. Once you could use the laws to make more or less accurate predictions about the nation's aggregate consumption of various goods and services. But because of the age of plenty's own peculiar ways, it has been impossible since the war to infer over-all consumption patterns from those of individual income groups.

 The Record—Here are the percentages of consumption in five important categories, as figured by the Twentieth Century Fund in its America's Needs

and Resources:

	1909	1929	1952
Food	5.6%	24.4%	29.2%
Clothing	3.9	13.3	11.4
Housing and Utilities 2	4.0	18.0	14.6
Household Equipment			
and Operation1	1.8	15.4	14.2
Transportation	5.2	9.9	11.0

Rising over-all income should have meant a steadily dropping share of spending on food. As the table shows, food spending instead has risen.

Rising income should have meant at least a stable share for clothing; according to Engel's followers, it should even have meant a rising share. But apparel's share of the disposable dollar has been dropping, as the industry knows only too well.

Rising income has meant a fairly constant share of spending on housing,



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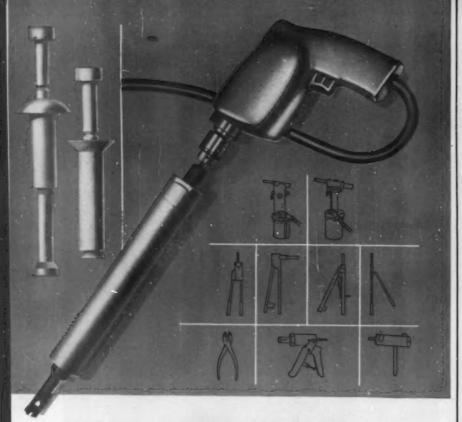
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This Cherry gun was designed and developed by the research department of the Cherry Rivet Division at Santa Ana, California, where it is also manufactured. In fact, all the tools for installing Cherry rivets are developed and produced in this plant. They are used to install a major portion of the blind rivets in use today by all industry.

In addition to developing installation tools, the Cherry research department is experimenting constantly with new designs and materials for aircraft fasteners in order to meet the greater stresses and higher temperatures imposed by ever-increasing aircraft speeds and loads.

This research recently resulted in the introduction to the aircraft industry of the new Cherry "700" rivet which has characteristics far superior to any blind rivet made previously. It provides a wide grip range, positive hole fill, high clinch, uniform stem retention and permits 100% positive inspection.

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**Special Report** 

#### Selling to an Age of Plenty

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but here Engel's Laws get only a so-so mark. There was a long decline after 1909, then a series of ups and downs. In the postwar era the figure has steadied, then risen slightly.

• Out of Step-Benjamin S. Loeb of Columbia University recently made a study of four categories-food, recreation, clothing, and transportation-comparing these with disposable income to see how the laws have fared. He found that, by and large, they worked for the 1929-1939 period, but that they haven't worked for the period from 1939 to the present.

Since then, only one of the four conformed, transportation, which has steadily climbed as a percentage of total expenditure.

Food and clothing—because they bulk so large in consumer spending, because they are basic necessities, and because they have performed so contrarily—provide the most interesting categories to study in light of the Wharton findings.

#### Uptrend in Food

There is added interest in the case of food because of Europe's postwar pattern of food consumption, which has been the reverse of ours. In an era of rising income, Europe has tended to react in the classical way by cutting food's share of expenditures below the prewar levels.

Just what has happened in the U.S. to reverse the pattern is complex and cannot be pinned down exactly because of the lack of complete data over the years. The shortcoming of the Wharton study is that, while it shows us that the proportion spent on food drops in each higher income group, it does not show us actually what happened within these groups over a period of time.

Theoretically, as more Americans moved out of the lower income classes into the broad middle band, they should have spent proportionately less on food. But all we know is that something has upset this theory.

• Fancier Eating—The most important factor has been the upgrading of the American diet—less eating of the cheaper starchy foods and grains and more eating of the more nutritious, and expensive, meats and vegetables. If we ate the same kind of thing in the same proportions as we did back in the prewar era, we would spend considerably less today on food than we do.

There is also the enormous increase in the consumption of processed foods



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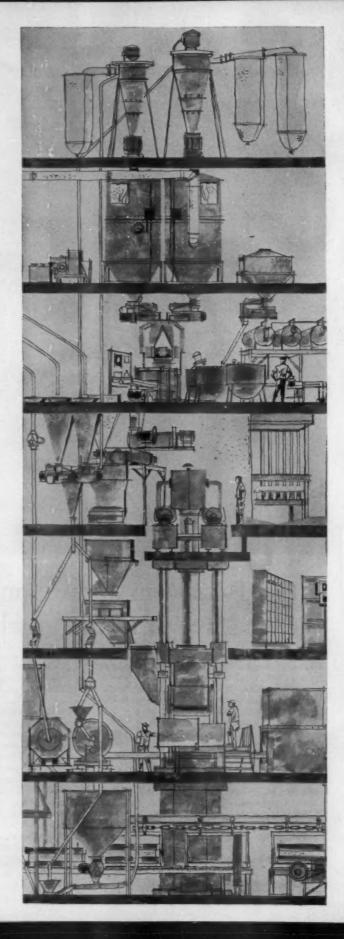


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new automatic factory does 18-hour job in 4 minutes



A MOVING BELT starts ground cork on the journey that turns it into cork composition for industrial use. Mixed with binder, ground cork is compressed into mats and cured by a new dielectric method that takes advantage of the polar nature of cork and binder molecules.



## Electronics and automation team up to produce better cork compositions for expanding industrial use

Today, in the Pittsburgh plant of the Armstrong Cork Company, a 7-story combination of automatic controls and electronic baking is turning ground cork into cork composition mats faster than ever before . . . and doing it better. Sheets sliced from these mats are far more uniform, make more dependable gaskets, clutch facings, and other cork products.

Cork is one of nature's best heat insulators. That's why, using steam heat, it used to take at least 6 hours of baking to set the binder of a 3-inch-thick mat. Often the outside of the mixture was "overcooked" before the center was done. Now, a mat three times as thick is baked electronically in about 4 minutes . . . 270 times as fast as the 18 hours required to bake three 3-inch mats by the old steam method.

Uniformity in mixing, too, is assured by automatic machinery that thoroughly blends ground cork with binder ingredients. Extremely sensitive equipment is needed because cork is so very light. For example, 4 ounces is the average load metered by a continuous weighing belt that's accurate within 1%.

Cork's light weight creates blending problems, too. It's difficult to make the light particles rub against each other hard enough to spread the heavier binder. A specially designed, high-speed, continuous mixer solves the problem. It pours a large amount of energy into a small amount of cork—30 horsepower into only 10 pounds of mix. Mixing

takes place under pressure in the confined area between a cylinder rotating within a slightly larger fixed cylinder. Every particle is coated with binder in 10 to 15 seconds.

To turn the mix into cork composition, it must be compressed into a mold and baked. For high density compositions, mix weighing 3 pounds per cubic foot must be compressed until it weighs 35 pounds per cubic foot. A hydraulic press three stories high does this job. On a 28" x 50" plate, it exerts pressures up to one million pounds.

After compression, the mix goes into a dielectric oven. While steam-cured cork composition varied as much as 18% in density, electronically cured mats vary less than 3%—a sixfold improvement.

To meet the changing needs of industry, Armstrong is continually developing new, more dependable types of cork composition. Among the more important are facings for

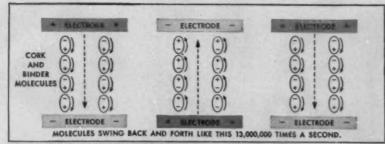
automotive and appliance clutches. For a discussion of cork as a clutch facing, send for the new 20-page illustrated manual, "Armstrong Resilient Friction Materials." Write on your letterhead to Armstrong Cork Company, Industrial Division, 8206 Indian Rd., Lancaster, Pennsylvania.



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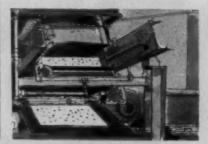
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cork and sinder molecules are dipoles that is, electrically positive at one end, negative at the other. When the cork mix is placed between two charged electrodes, the molecules always turn their positive poles toward the negative electrode. By alternating the electrodes from positive to

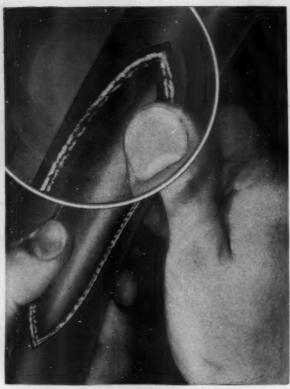
negative at high frequency (13 megacycles), the dipolar molecules are made to swing violently back and forth 13 million times a second. Friction developed between these moving cork and binder molecules uniformly heats the 9-inch-thick mat from top to bottom in only 4 minutes.



THE CURED MAT IS SLICED into sheets varying from ½2-inch to 1-inch thick. Because mixing is precise and dielectric heating cures the mats evenly, these cork composition sheets are exceptionally uniform in density, tensile strength, compression and recovery range, and in color.



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DEVILBISS

#### Selling to an Age of Plenty

Starts on page 66

## **Two Levelling Factors**

 Middle-income families in all groups have about the same money to spend on each member.

Average	Income	After	Taxes	per	Copita
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Income per family	All	Self-employed	Manual'	Clerical <sup>2</sup>
\$3,000 - 3,999	1,090	1,097	1,055	1,164
\$4,000 - 4,999	1,312	1,322	1,237	1,351
\$5,000 - 5,999	1,514	1,439	1,465	1,661
\$6,000 - 7,499	1,789	1,891	1,604	1,969
\$7,500 - 9,999	2,108	2,158	1,822	2,410
\$10,000 and over	4,272	5,093	2,054	4,144
All	1,382	2,023	1,147	1,553

<sup>\*</sup>Includes skilled, semi-skilled and unskilled wage earners.

<sup>2</sup>Includes sales and clerical personnel.

 In many families the size of the income depends on the number of breadwinners.

Average Income After Taxes per Earner

Income per family	All	Self-employed	Manual'	Clerical <sup>2</sup>
\$3,000 - 3,999	3,874	3,190	3,868	3,493
\$4,000 - 4,999	4,056	4,085	4,047	4,053
\$5,000 - 5,999	4,192	4,206	4,168	4,215
\$6,000 - 7,499	4,727	5,091	3,869	5,151
\$7,500 - 9,999	5,271	7,013	3,810	4,962
\$10,000 and over	12,160	14,854	4,793	10,837
All	4,608	5,700	4,079	4,349

<sup>\*</sup>Includes skilled, semi-skilled and unskilled wage earners.

<sup>2</sup>Includes sales and clerical personnel.

-frozen foods, cake mixes, prepared soups, and so forth. (It was in part to cope with the flood of new foods, such as frozen orange juice, that the Bureau of Labor Statistics undertook its 1950 study of consumer spending.)

The prepared foods usually sell at premium prices, since they involve labor that is ordinarily performed at home. But Americans are willing to pay for the convenience that goes along with them. Likewise, Americans also con-

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**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

sume more food outside the home than they used to, and this, too, is more expensive than consuming food at home. • New Element-The Wharton study shows that there is one more factor now to be reckoned with in assessing food patterns-the food habits of manual workers and their families. As we now know, this group doesn't appreciably change its food consumption patterns from one income level to another. Since this group constitutes such a large portion of the U.S. population, its climb up the income ladder may have strongly influenced the national food consumption pattern.

#### Downtrend in Clothing

On the subject of clothing habits, the new data reveals things about the relationship of family size to clothing purchases that should give pause to the apparel industry.

It is a truism that the population increase in the U.S. has not been clear gain for the clothing industry. chief reason for this has been the rising proportion of the very young and the very old in the total population. The clothing needs of these two groups are less than those of people in between, a factor that has played a part in the apparel industry's failure to keep up with the growth in income.

· Other Things First-But something else happens, too, as family size increases. The new study shows very pointedly that clothing is considered low in priority as families get bigger and find new drains on the exchequer.

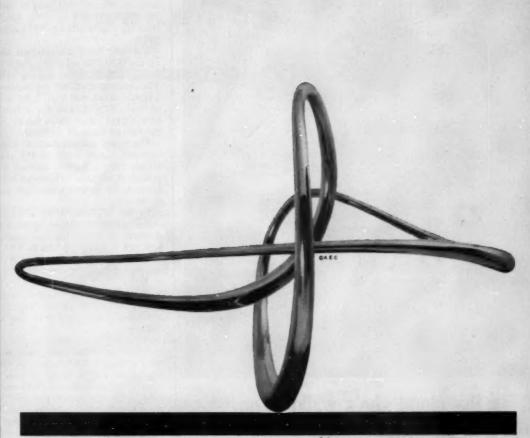
Here are some of the apparel indus-

try's vulnerable spots:

The thin spread. It is obvious that in adding more members to the family, Americans simply spread not very much more money over more people.

The difference in the clothing budget for families of two and families of six or more in the \$4,000 to \$10,000 disposable income range runs about 50% or 60%. In other words, they increase their clothing budget by only about half to take care of three times the number of people. And at the \$10,000-and-over level, the increase in dollars to take care of the four new members is only 25%.

The population squeeze. Increased family size does not necessarily mean an increase in the clothing budget. Something seems to happen, for instance, to families of five-just why, it is hard to say. Very markedly, the clothing budget for families of five stays about where it is for the family of four. In



Sculpture by Jose de Rivera-symbol of American Enka Corporation, one of America's great producers of synthetic fibers.

**Performance** depends above all upon quality and planning. It is vitally important to the user to know that Enka has developed its product with his specific end use in mind from the very beginning. That is why Enka yarns consistently deliver satisfactory performance in action.

Manufacturers of industrial hose know they can rely on Enka high tenacity rayon to give their products the **strength and durability** they require. And, from the standpoint of economy, Enka high tenacity rayon offers these advantages at **lower cost**. Think what this can mean in your business and call American Enka today.



#### Another reason why Hammermill Bond <u>prints</u> better, <u>types</u> better, <u>looks</u> better



# Clean as the cloud she's walking on —today's Hammermill Bond

WHEN cleaner-than-ever Hammermill Bond comes into an office, nice things begin to happen. Letters start looking better. The men who sign them notice it. And secretaries earn the kind of praise that makes everyone feel good.

Hammermill Bond has always been scrubbed cleaner than a nurse's uniform. On its half-mile trip through our plant, the pulp is washed and screened and bleached and then washed again. That's why, in the past, you've found so few specks to mar its brilliant blue-whiteness.

Now, a Hammermill invention (photo at right) scrubs Hammermill Bond cleaner than ever. It gives our fibers an extra "bath", just before they go on the papermaking machines. The pulp fibers are whirled through cone-shaped pipes. Dirt particles, being heavier, are flung to the outside and carried away so they can never get into the paper. Clean fibers rise to the top, and are piped immediately to the papermaking machines. There, they become paper for the cleanest-looking letters you've ever signed.

Hammermill spent four years develop-

ing this invention and half a million dollars to install it, just to make your Hammermill Bond "cleaner than clean". It's another Hammermill technological advance in papermaking that makes Hammermill Bond 1) print better, 2) sype better, 3) look better. Hammermill Paper Company, Erie, Pa.

Printers everywhere use Hammermill papers. Many display this shield.



POND costs no more

- and actually less than many other watermarked paper

**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

fact, in the \$7,500-\$10,000 bracket, the family of five in 1950 spent less than the family of four-\$944 as against \$988.

For still other unexplained reasons, in the \$10,000-and-over category, the dollar decline seems to start sooner. The average clothing expenditure for a family of two was \$1,472, for a family of three \$1,434, and for a family of four \$1,410. But for a family of five the budget bounced up \$400.

The ladies' self-sacrifice. As might be expected, some items in the clothing budget take a terrible beating in this process of attrition. The worst hit of all seems to be women's hats, gloves, and accessories.

In the \$7,500-\$10,000 bracket, the dollar budget for these items actually dropped as family size increased—from \$100 for a family of two to \$70 for a family of six. At income of \$10,000 and above, spending dropped from \$265 to \$155.

• Why It Happens—From this it would seem evident that the clothing budget is caught by a curious twist in the age

Prosperity has helped to boost the birthrate and at the same time to level out the size of families, so that on one hand there are far fewer families with no children or with one child and also fewer with many children. And there are many, many more families with three or four or five children. But having more children—in more families—puts a greater strain on family budgets, which also have to provide better and bigger housing, more appliances, and a lot of other goods and services that have become part of our standard of living.

Something has to give as the pressure mounts. And one of the things most easily expendable is new clothing.

Psychologically, we no longer attach to clothes the prestige value that we once did. In our prosperity, we have become a nation of casual dressers, reflecting our growing leisure-time pursuits. Everyone dresses informally and tends to dress pretty much like everyone else, which has had the effect of further leveling out the visible distinctions between income and social groups.

#### III. What Next?

What will happen in the future? Will there be a change in the savings-spending ratio? Will cars—after this year's sales lull—and other hardgoods continue taking as large a share of consumer's spendable income? Will clothing ever get back anything like its old share of the consumer's dollar? Will

**Engineering in Action** 

# ... BACKED UP three deep

with parts and service-when you use

## Allis-Chalmers FORK TRUCKS

You enjoy almost "Factory-town" service wherever you are when you operate Allis-Chalmers Fork

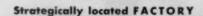
Trucks — for you are backed up *three deep* by Allis-Chalmers' highly successful dealer-branch-factory system.

factory system.

What does this mean? It means that your dealer is serviced directly from a nearby factory branch — one of 14. Each branch carries a full stock of True Original Parts and is staffed with factory-trained servicemen as well as sales engineers. This assures prompt attention whether you need a replacement part or technical advice.

Ask your Allis-Chalmers material handling dealer to show you how Engineering in Action with this three-deep service can help on your specific job. Write for literature and details.

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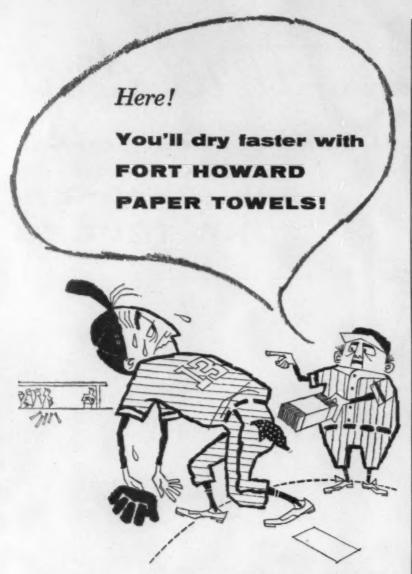
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Your nearby DEALER

**ALLIS-CHALMERS** 





Whether social necessity or the manager dictates, "Take a shower!" people everywhere rely on Fort Howard Paper Towels to dry faster, better. You'll like them, too! And Fort Howard Stabilized Absorbency keeps towels fresh and fully absorbent regardless of age.

That's why your best bet in paper towels is Fort Howard. 18 different grades and folds assure low-cost user satisfaction for every type of washroom. Rely on your Fort Howard distributor salesman to recommend the towel service which suits your needs!





FORT HOWARD PAPER COMPANY, Green Bay, Wisconsin

For 37 Years, Manufacturers Of Quality Towels, Toilet Tissue and Paper Napkins **Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

food spending once more fall back to its historically lower share?

 Toward the Center-At this point, no immediate big changes appear on the horizon. However, it is possible to make some conjectures about long-range trends.

In general, it is almost a certaintybarring a depression—that American spending patterns will increasingly tend toward common center, that some of the differences that remain will slowly flatten out.

We are more and more an employee society. The entrepreneurial element among us will probably continue to decline as a percentage of the whole. It is notable that in the face of rising population, the number of businesses in the U.S. has remained at just about the same level for the past 15 years, which means that the self-employed steadily shrink in proportion to the others.

Hence, unless there is a basic change in the tax laws that would favor small businessmen—or the upper-income groups—it seems reasonable to expect that the trend toward spending rather than saving will affect more and more Americans.

Consumption patterns will almost surely continue to be more uniform. More and more, this is a white-collar country. Not only are there fewer farm laborers, but also are there fewer and fewer production workers, as employment in the services, professions, and other white-collar activities grow at a faster rate than those employed in industry.

Furthermore, it is reasonable to expect that present manual workers' families will tend to take on more of the characteristics of the middle-income class to which they have risen.

The differences between Negroes and other minority groups and the white majority will also tend to diminish as racial barriers break down. This would follow the traditional American pattern, established in the past by the national minorities who moved out of the tight little communities that stamped them with a common identity.

The remaining regional differences will also tend to diminish. Even the influence of weather on clothing and living habits will level off somewhat with the spread of air conditioning. The trend toward corporate mergers, with its creation of ever larger national distribution and marketing organizations, will also play a part. National advertising will continue to grow, and it will push people everywhere into wanting the same kinds of goods.

· New Trends?-Will any of this mean



Alert vision in management accounts for the outstanding success of these truly great American corporations. *Today* on their desks office procedure is speeded with *automation for figures*. Today these and hundreds of other businesses, large and small, rely on Monro-Matic desk calculators.

The new Monro-Matic Duplex Calculator gives split-second answers to several problems simultaneously—actually

adds as it multiplies, adds as it divides.

## See the MAN from MONROE

Thus figure-work time, costs, and operator effort are measurably reduced. This can apply to your business. Write or telephone Monroe Calculating Machine Company, Inc. General offices: Orange, New Jersey. Offices throughout the world.

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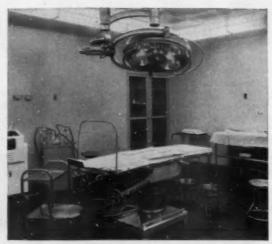


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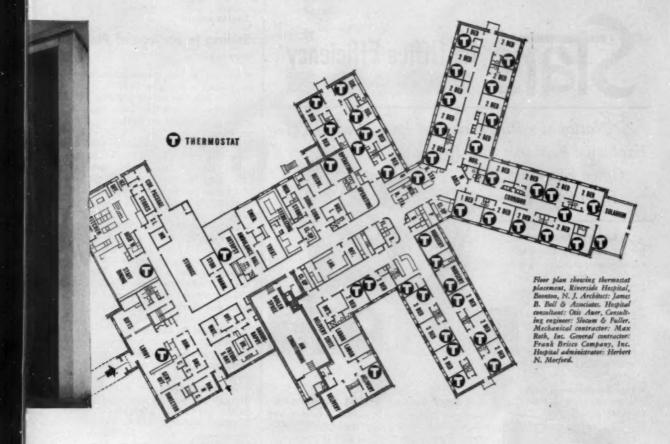
## How Honeywell can help satisfy



Thermostat on the wall gives occupants of Riverside Hospital bedside temperature control. Patients have only to dial the temperature that suits them best. The Honeywell thermostat then maintains it accurately and dependably, regardless of the room's exposure or changes in the weather outdoors. Every patient bedroom is thermostat-equipped.



Use factor helps determine building's control needs. In the operating rooms, for example, temperature requirements are not the same as in patient bedrooms. Number of people present in some areas varies, creating still another type of control problem. In all cases, Honeywell thermostats precisely control heating, cooling and ventilating as needed.



## your indoor weather needs

Honeywell Customized Temperature Control installation assures ideal comfort

RIVERSIDE Hospital is the result of careful planning and active cooperation among civic leaders of Boonton, New Jersey. Now Boonton has an attractive 65-bed hospital, in keeping with the latest industrial engineering principles.

In a busy hospital indoor comfort needs vary widely. To meet them, Riverside's planners wisely chose Honeywell Customized Temperature Control for the heating and air conditioning system.

Its flexibility makes the Honeywell installation ideal. In air-conditioned spaces such as the operating toom, it maintains temperatures at precise levels winter and summer. During the heating season patients in every room enjoy individual room temperature control. And in other areas, strategically placed Honeywell thermostats compensate quickly and accurately for exposure and changes in weather, use and occupancy.

That's what "customized" means—a control installation fitted to the needs of the building and its occupants, in heating and cooling, in ventilating, and in controlling humidity. True customized control can best be provided by Honeywell. For only Honeywell manufactures all three types of controls—pneumatic, electric, electronic—which permits Honeywell to make truly objective recommendations.

In a hospital, factory, bank or store—any building of any size, new or existing—Honeywell Customized Temperature Control can help solve your comfort problems.

For full details of Honeywell Customized Temperature Control, and the economical Periodic Maintenance Plan, call your architect, engineer or local Honeywell office. Or write Honeywell, Dept. BW-6-140, Minneapolis 8, Minn.

## Honeywell

**Customized Temperature Control** 

112 offices across the nation





National's Ringbook and Post Binders Offer Exclusive Features that Promote

Office Efficiency... Help Save Time!





#### Lock Booster Ringbooks

- Best grades of leather or plastic for attractive appearance, long life.
- Steel hinges for flat opening without cracking.
- Smooth, oval-section rings precision matched minimize sheet wear.
- Fibre back prevents wear and scuffing on backbone.
- Lock Booster opens rings at a touch or closes them securely.



#### Lockmaster Post Binders

bound in brown or gray Dupont vinyl binding with stainless steel rims to protect desk top and binder edges. Fingertip open with positive locking.



#### Turn Lock Post Binders

has easy-to-grasp knob that turns left to open, right to provide positive lock that keeps sheets securely compressed in binder.

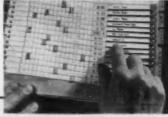


#### Prongmaster Visible Binders

with automatic shift for insertion or removal of sheets
. . . flat opening . . . metal rims and hinges.



with Dupont vinyl cover over stiff board...metal rims and hinges...Lock Booster for positive locking.





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## NATIONAL BLANK BOOK STATIONER

**Special Report** 

#### Selling to an Age of Plenty

Starts on page 66

a reversal of the consumption trends established so firmly by 1950?

With food the answer is maybe. The American diet may have been upgraded so far by now that no further big gains are to be made.

With clothes, the case is probably quite different. The men's clothing industry, thanks to its inventiveness, has made gains and may make more through the accent on styling. The growth of the middle-income market may also help, to a degree. But it is difficult to imagine that the clothing industry in the foreseeable future will get back its old share of the consumer's dollar.

For that to happen we would have to throw away our car heaters, chuck out our air conditioning, move back to the city by droves, pass laws against blue jeans and shorts, and go back to working a five-and-a-half day week.

• Sustained by Innovation—What will happen to the great hardgoods boom that has poured out washing machines, refrigerators, mixers, and cars by the millions in the past few years?

In some measure, the answer to this depends on an unknown but potent factor—innovation. There is no reason to expect that there will be a major sag in consumer demand for hardgoods. The replacement market alone for autos, for example, is figured at about 4-million a year. But whether or not the whole hardgoods industry can keep its share of the consumer's dollar depends on the initiative of American industry in developing new goods that are attractive enough to lure the consumer into getting rid of his perfectly good widget and buying the new widget.

It was innovation that created the car industry, the appliance industry, the plastics industry, and dozens of others, and found new ways to create demand for everything from paper products to chemicals. This in turn pushed up the standard of living of Americans—and their rate of consumption. To a large degree, it is what will keep it up.

#### REPRINTS AVAILABLE

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# Now your ceiling can have prescription lenses, too

Prescription lenses in your office ceiling? Yes, if you want lighting that gives a glarefree radiance to lift your spirits, reduce the strain of seeing.

Or lighting in stores and shops, that induces moods agreeable to more relaxed stopping and shopping.

It's this kind of lighting that Corning Pattern No. 70 Low-Brightness Lens Panels give—glass panels that don't ever warp, fade, discolor or build up dust-collecting static charges.

Yet the ability of glass in manipulating light to almost any desired degree of brilliance or diffusion is just one of its many talents. In diverse special and mass-produced forms, today's glass is emerging as a basic material of design and construction. No longer fragile and limited in use Probably within your own fields of interest you can find glass tangling with high temperature problems, slugging it out with chemicals that make lacework of even the sturdiest metals, breaking the endurance records of materials you may have considered more durable.

Among Corning's research-developed glasses you'll find some lighter than aluminum, some heavier than concrete, white as snow, or black as a moonless night, thin as tissue or thick as armor plate, sensitive or indifferent to temperature.

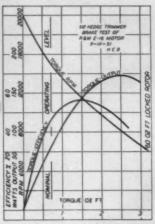
Does this suggest that glass might solve some product design or process problem of yours? If so, write, wire or phone Corning. Or, for a more leisurely approach to your potentially profitable use of glass, send for a copy of "Glass and You." In it you'll find the basic story of the development of glass as a modern material for design and construction.



Massed glass prisms make up Corning Pattern No. 70 Low-Brightness Lighting Panels that bathe the work area in soft, glarefree brilliance. (Segment pictured shows prisms actual size.) Pattern No. 70 is one of many forms of Corning lightingware, each designed to match different lighting requirements efficiently.







matched motor parts R&M designed for the Skil Hedge Trimmer, showing torque efficiency, output and RPM

# **R&M Motor Helps Skil Make** Trouble-Free Hedge Trimmer

The most important single factor in motor-driven products is to get the right motor for the job. Much depends on proper correlation of motor and machine designs.

An outstanding example of good correlation is the Skii Hedge Trimmer. Skil Corporation engineers set rigid requirements for the motor. It must be light, compact, powerful. It must withstand rough handling, moisture, overloads. As they have for the past 25 years, Skil engineers gave these requirements to our motor-design specialists at R & M, told us to take it from there.

The result? A smooth-running motor that is rugged, dynamically balanced to withstand the 900-perminute movement of the trimmer blade. This tiny motor develops nearly 1/4 horsepower, with 6 ounce-feet of blocking torque off the motor spindle, and a no-load speed of 20,000 RPM.

The final word, however, comes from Skil's service manager, who says the Skil Hedge Trimmer has a wonderful service record, giving outstanding performance with practically no motor failures.

If you have a motor-driven product, it will pay you to check with us at Robbins & Myers. We can supply you with a wide choice of types and sizes of complete motors or matched motor parts.

But, most important, we'll do a fast, thorough, economical job of custom-designing a motor that's correlated with your product. Don't settle for an "off-the-shelf" compromise. Write us today, Dept. BW, for complete information-no obligation, of course.

# ROBBINS & MYERS, INC.













# In Washington

# Atomic Power Plant O. K.'d For New England Utilities

The Atomic Energy Commission signed its first contract under the power demonstration reactor program, which is aimed at bringing private industry further into nuclear power development. The contract is with Yankee Atomic Electric Co. for a \$34.5-million, 134,000-kw. project at Rowe, in northwestern Massachusetts.

AEC will underwrite research and development cost up to \$5-million; the company pays this kind of expense above the \$5-million level, as well as the construction costs. Construction is scheduled to be in full swing within a year, and the plant to be producing electric power in 1960.

Yankee Atomic is a corporation set up by a dozen public utilities in the region. These utility companies will buy the electricity that's generated at the atomic power station and distribute it.

# Coal, Oil Shipping Shortage May Bring Out the Reserves

Shortage of shipping space to haul U. S. exports, particularly coal (page 157) and oil, is bringing demands on the Maritime Administration to release more than 100 ships from its mothball fleet.

Maritime has already approved transfer of 10 tankers to the Defense Dept.'s Military Sea Transportation Service, and other requests have had tentative approval. The agency held hearings this week on a request of the International Cooperation Administration for 30 ships to carry commodities in the foreign aid program.

Coal exports—traditional barometer for freight rates are running toward a record year, with some guesses that they will top the 47-million tons in 1947, when the aid program was at its peak.

# Legion Lobby Wins Showdown, Then Critics Top Its Lavishness

The strength of the American Legion's Washington lobby was effectively demonstrated last week in the House Committee on Veteran Affairs.

In a showdown vote on demands by the Legion for easier, bigger pensions for World War I veterans, a majority of the committee said O.K.—ignoring counterpleas by committee Chmn. Olin Teague (D-Tex.) and by Pres. Eisenhower, who sent Teague a letter to bolster the stop-pension move.

Main feature of the Legion's bill would provide \$105 monthly pensions for veterans at age 65, regardless of disability, if they are married and earn less than \$2,700

per year. That and other Legion-backed proposals also adopted would cost the Treasury an estimated \$536million in the first year—on top of existing veteran benefit costs, now running about \$3.4-billion per year.

Angry opponents of the Legion bill then started voting for all the veteran benefits that anybody could dream up. As a result, the bill also carries bigger pensions for widows of all war veterans (including Spanish-American), higher burial allowances, and bigger compensatory payments for disabled veterans and their dependents or survivors. The entire package would cost another \$1.3-billion the first year, about \$1.8-billion by the fifth year.

Teague and his bloc of the committee call it a ridiculous piece of legislation that owes its existence strictly to lobby pressure. But they may not fight it on the House floor, relying on the Senate Finance Committee, headed by Virginia's economy-minded Sen. Harry F. Byrd, to kill it. Failing that, they expect it to be killed by a Presidential veto.

# Committee Favors Easing Terms For Requiring Renegotiation

Extension of the Renegotiation Act for three years—with some new exemptions—has been recommended by the Joint Congressional Committee on Internal Revenue Taxation. Under the law, the government can recover so-called excessive profits from contractors who have total government orders of at least \$500,000.

The committee proposes that the minimum to come under renegotiation be boosted to \$1-million and that the standard commercial-article exemption be broadened.

Right now, only items that are bought by the government under "competitive conditions" are covered by the exemption. The proposal would knock out the factor of competition, would rule that standard commercial articles are those "customarily maintained in stock or covered by established price quotations."

Odds are that Congress will go along with the committee's recommendations.

# Manufacturers Who Wholesale Can't Price-Fix Their Products

The U.S. Supreme Court this week ruled by a 6-3 vote that a manufacturer who also distributes his products cannot legally "fair trade" with independent distributors.

McKesson & Robbins, Inc., manufacturer of \$10-million worth of drugs in 1954 and wholesaler of nearly \$340-million worth in the same year argued in a Sherman Act case that Congress never intended to prevent manufacturer-wholesalers from fair-trading their own products.

Chief Justice Earl Warren said in the majority opinion that Congress had "made as plain as words can make it" that what counts is whether the contracting parties compete with each other. The court decided that McKesson the wholesaler competes with independent wholesalers, and agreements between them restrain trade.

### **BUSINESS ABROAD**

Wallace Oldstrom of Jamestown, N. Y., decided to trade laundries for a year with friend Nils Martin of Gothenburg, Sweden. Below, he pitches into shop job to show Swedish workers he's right with them.



AMERICANS in Sweden had two cars to use. Here, Mrs. Oldstrom parks Morris.

14-YEAR-OLD Muffet Oldstrom checks over bulletin board at Swedish girls' school.



# When Men

You're a small businessman. You have a wife and two children. You live in Jamestown, N. Y., and earn a good living. What's it like to pull up stakes and spend a year working abroad --in Cothenburg. Sweden?

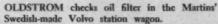
-in Gothenburg, Sweden?
For Wallace S. Oldstrom and his family, transplanted from Jamestown to Gothenburg, it didn't make much difference in the way they lived (pictures). True, they drove a Swedishmade Volvo, worried over unscrambling Swedish recipes, missed the customary TV programs. But coming from a small



U. S. BOSS of Swedish laundry, Oldstrom, talks at the shop with union steward Erik Johansson (right). He worked hard at building up employee morale.



RECIPES in Swedish had to be translated by Mrs. Oldstrom, step by step.





SHOPPING at farmers' market, Mrs. Oldstrom watches budget carefully. Food costs are higher in Sweden.



# Swap Businesses Over the Ocean

city predominantly Swedish-American, they had little trouble with language. And for housekeeping they had almost as many electrical appliances to help out as in their American home.

But there was more to the experiment than adjusting to Swedish daily life. During the year, Oldstrom also ran a laundry and dry cleaning business in Gothenburg. The idea for doing this is what helped start the experiment rolling.

• Trading Businesses-In 1946, during a trip to Sweden to visit his grand-

father's hometown, Oldstrom met Nils Martin. Both men ran laundry and cleaning establishments—Oldstrom in Jamestown, Martin in Gothenburg. The friendship they built up through later meetings and transatlantic correspondence led them last year to swap businesses—and homes.

Martin filled Oldstrom's spot as president of Park Pearl Cleaners, Inc., which has some 50 employees and four small plants. Oldstrom became top man at Lundby Dry Cleaning & Laundry, Sweden's second largest cleaning company with 150 employees, a sizable plant, and six stores.

• Making Adjustments-Each man found sharp differences in his new job.

Martin had to adapt himself to the informality and speed of Oldstrom's Jamestown operation. The American customers, he discovered, have enough money to have clothes cleaned at least every week. They aren't fussy about workmanship—the creases on shirts, for instance. Martin learned that up-to-date cleaning and pressing machines are indispensable here for handling the

# Only STEEL can do so many



The Day Of Judgment is depicted by this magnificent stained glass window in St. Gertrude's Church, Franklin Park, Illinois. This breath-taking window was designed and made in the United States, and its weight is supported by a network of slim USS steel mullions—further evidence of the versatility of steel, which serves industry, farm, home and church in so many ways so well.

# jobs so well



Perfect Sun And Light Control.

Designed to stay up all year, this awning can be rolled down to any level for sun protection or rolled up against the house to admit light on cloudy days. These roll-up awnings are made from tough USS Galvanized Steel for sturdiness and long wear. In laboratory tests, the awning was raised and lowered over 20,000 times without failure.

See The United States Steel Hour. It's a full-hour TV program presented every other week by United States Steel. Consult your newspaper for time and station.





2 Million Volts will be generated in this allsteel transformer tank. It is part of an x-ray machine used for industrial inspection. USS steel plates and sheets were used for the important parts.



If You've Always Wanted A Fireplace, consider this all-steel fireplace-chimney combination. It can be installed in most old or new houses in just four to six hours. USS Stainless Steel is used for the trim as well as for internal parts where maximum durability and resistance to heat is required.

# UNITED STATES STEEL

For further information on any product mentioned in this advertisement, write United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

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6-1006





IN U. S. Nils Martin admires the machinery at Oldstrom's plant in Jamestown, N. Y. He judges that the U. S. cleaning industry is 10 years ahead of Sweden's.



IN SWEDEN The Martins and the Oldstroms get together to show color slides before Oldstroms return to U. S. Children loved the exchange of homes.

fast turnover and keeping costs down.
Oldstrom, however, did more changing than adapting. The Gothenburg

company had been losing money for five years. This year, under Oldstrom, it made money. "It's absolutely immoral for a businessman not to make

a profit," he says.

He put the Swedish chain in the black by cutting costs. During the year he bought new machines, fixed up old machines that had been standing idle. While he dropped 23 workers from the payroll, the plant's improved efficiency boosted wages for the other workers.

• Yearend Report—At year's end, back in Gothenburg, Martin says that American cleaning techniques are 10 years ahead of Sweden. Looking over the reports he got from Oldstrom, Martin

says, "I got gladder and gladder."

Oldstrom says employee morale is what counts. He often rolled up his sleeves and worked in the shop beside the others. "The main thing," he says, "is to let workers know the boss knows what he's doing." (Martin had never actually worked in a laundry before his Jamestown stint.)

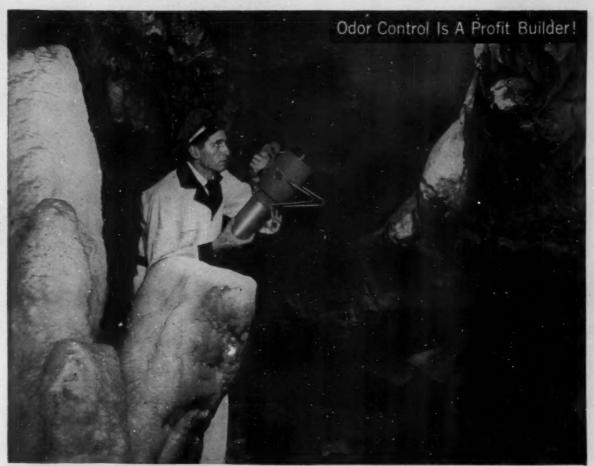
Oldstrom is also proud of his exhibit at the Swedish Industries Fair—the first exhibit by a dry cleaning out-fit in Sweden. His main success, as he looks back, is his elimination of

"frills" in the shop.

"These girls were taught to do a work of art," he says. "When they folded a shirt, they patted it as if there was a man in it. I believe in quality only where it shows—and matters." FND

puts its quality in writing

**NEW YORK . TORONTO** 



Airkem operator using vaporizer to treat stale air in underground cave.

# Caveman's tactic solves airy problem

More than 1,100 feet below the earth's surface, this subterranean wonderland awes thousands of tourists every year. Lookout Mountain Caves, near Chattanooga, Tennessee, startles the eyes with 145-foot Ruby Falls, countless stalactites and stalagmites of solid onyx and huge vaulted rooms. But the caves had a peculiar problem.

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# Too Tough?

Stalin henchman, Kaganovitch, steps down as boss troubleshooter on Soviet labor and wages.

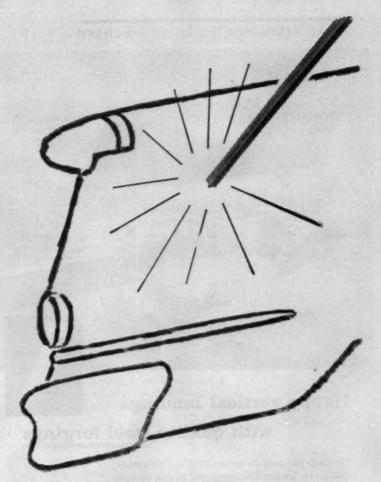
Last week Lazar M. Kaganovitch, for decades Stalin's troubleshooter on labor and industrial management, resigned as chairman of the Soviet State Committee on Labor and Wage Questions. The move, variously interpreted in the West, may point up Moscow's difficulties in overcoming its productivity and manpower crisis—which Kaganovitch set out to cure when the Committee was formed with much fanfare a year ago.

Western experts on the Soviet are also speculating what role the behind-the-scenes struggle for power among Stalin's heirs may have played in Kaganovitch's demotion. Like V. M. Molotov—who resigned as Minister of Foreign Affairs a week earlier (BW—Jun.9'56,p24)—Kaganovitch was one of Stalin's closest collaborators. And it is generally believed he opposed the campaign to whittle down the dead dictator to human size. However, like Molotov, Kaganovitch remains one of the I1-member presidium of the Soviet Communist Party, the most powerful organ in the country.

• First Sponsor—If—as is generally believed—Kaganovitch has stepped down because of pressure from party boss Nikita Khrushchev, it is indeed ironic. For it was Kaganovitch who picked Khrushchev up out of the Ukraine in the late 1930s and brought him into the Kremlin's inner circle, where he became a favorite of Stalin.

Kaganovitch's role as a powerful Soviet figure goes way back. In the 1929-32 period he helped tie the can to Mickhail Tomsky, leader of the Soviet trade unions. Under Tomsky the unions bore some slight resemblance to Western trade unions; at least they made a token effort to represent the workers' interests. But under Kaganovitch's "reform" they came to be exclusively organs of the state dedicated to extracting more production from the workers. From this role Kaganovitch went on to higher economic mattersbut in the Soviet hierarchy he has remained the symbol of a tough labor policy.

That's why, when Kaganovitch was chosen to head the new policy committee on labor and wage problems last year, more pressure on the factory hand was anticipated. However, recent developments in the Soviet Union—the accent on de-Stalinization and a more liberal policy all around—contradict this



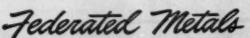
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whole approach (BW-May26'56,p31).

Furthermore, Soviet industrial managers are learning that today's higher level of technology requires technicians willing to work at their highest ca-

Experience in the Soviet Union, as in the West, proves that high productivity is possible only with better wages, better education, and relatively

· Wage System-Moscow's handling of the problem is complicated by a system of wage rates developed in the 1930s and hardly changed since. This system permits a rise in wages only if a worker boosts his piecework produc-tion. Plant managers have sought to get around this by setting artificially low "norms"-the standard rates at which each worker is expected to produce. They have also boosted wages by classifying workers higher than their job requires under the law. This kind of skirting of the rules wasn't due to any human kindness, but was simply an attempt to boost income-which also depends on topping the norms-and to meet the constant pressure from above

pacity.

more freedom.

for higher production.

· Pay Goes Up-The result of all this maneavering has been an uncontrolled wage rise. Before the war earnings were

25% to 35% above scales due to production beyond the norms. But in recent years, it has reached 80% and even

100%, knocking the whole wage control system into a cocked hat. That has sabotaged the investment program of

the top planners in Moscow, who want

increased productivity but who don't

want to have to divert investment capi-

to Kaganovitch and his committee. A

wholesale revision of the wage structure

was planned to get earnings and norms

20th Congress of the Soviet Commu-

nist Party earlier this year (BW-Feb.

18'56,p27) but no solution was pre-

sented. It isn't clear whether Kagano-

vitch failed to come up with a remedy

-or did find one that was too tough for

· Politics-Or, some speculation goes,

the whole question of a wage policy

may have taken a back issue to Kremlin

politics. Kaganovitch is not considered

a Khrushchev man. He has been re-

placed as chairman of the committee by

Alexander P. Volkov, a voung bureau-

crat with little or no experience in labor

questions or industrial management. But Volkov is a protege of Khrushchev. Kaganovitch's replacement also comes at the same time that Nikolai Shvernik.

another old time Stalin collaborator, has been dropped from his job as chief of the unions-again replaced by an un-known, V. V. Grischim. END

The problem was discussed at the

It was this problem that was handed

tal to the workers to get it.

Khrushchev's soft line.

back into line.

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The corporation had borrowed some years before to expand its main store but movement toward the suburbs had affected store traffic, and "occupancy cost" to the sales dollar became too high. This made it difficult to operate at a sufficient profit to maintain dividends to the stockholders, amortize the substantial mortgage on the main store, and finance the new suburban store necessary to protect the company's dominant position in its sales area.

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4. A "snugging in" of the main store operation through the relocation of certain departments and the sale or lease of surplus property.

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# In Business Abroad

# **Experts Say West Europe Will Import** Even More Coal From U.S. Than Now

Western Europe may import 33-million tons of coal from the U.S. this year. Consumption of American coal is already running at a rate of more than 30-million tons, well over last year's 27-

What's more, experts of the Organization for European Economic Cooperation (OEEC), in a report on energy issued last week, predict those imports will keep right on going up (BW-Mar.17'56,p140). They base this partly on their over-all forecast; a rise in West Europe's energy needs from 730-million tons of coal equivalent last year to 1,200-million tons in 1975.

The OEEC experts threw cold water on what they see as wishful thinking about the quick tapping of atomic energy. They predict that West Europe will need 44-million tons of U.S. coal by 1960, more than 55-million by 1975.

These imports impose a tremendous dollar burden on Western Europe's economy. Last year, coal imports-averaging \$10 a ton plus \$9 a ton for ocean freight-cost \$513-million. This was 16% of Western Europe's total fuel bill-and the OEEC experts believe U. S. coal's proportion of the market will rise to 20%.

What's worrying the Europeans especially right now is the rising cost of freight. Abnormal grain and steel imports are pushing Atlantic cargo rates sky-high. And the freight boom is heightened by Washington's recent refusal to accept a French offer to put 25 mothballed wartime merchant ships into service.

Lately, Britain is bearing less of the bill for imported coal. But the total bill for all of Western Europe remains the same since Germany, Italy, and France have picked up the purchases that Britain has cut down.

# Dresser Lines Up Turbodrill-French, Not Russian, Model

Dresser Industries, Inc., the Dallas company that tried unsuccessfully to get Commerce Dept. permission for a swap of information and oilwell drilling machinery with the Russians (BW-May19'56,p135), has found another source of supply. Dresser announced last week that it had signed a licensing agreement with Les Etablissements Neyrpic, a French company that has developed a drill similar to the Russian turbodrill.

Dresser has an exclusive license to build the turbodrill in the U.S., Canada, Mexico, and Venezuela. Dresser plans to send drilling teams to France to work with Neyrpic, at the same time to put its international organization at the service of the French

At the same time, Dresser has announced the formation of a French company with headquarters in Paris to represent the various Dresser affiliates on the Continent.

Apparently an earlier announcement of a licensing arrangement between Neyrpic and Hughes Tool Co. of Houston (BW-Jun.9-'56,p38) concerns only information about rock bits for the turbodrills. However, Neyrpic says this information is available to all comers.

# A Crucial Turn for Trade Policy

 Era of tariff cutting that began in 1934 and went into high gear with GATT is about over.

 Question now is, will next turn take U.S. into OTC to attack other barriers—or back to protectionism?

 Reviving protectionist strength points one way, but expanding U.S. trade exerts strong counter-pull.

U.S. foreign trade policy has reached a major crossroads with the successful conclusion of the latest round of multination tariff cutting carried out at Geneva during the past few months

(BW-Jun.9'56,p28).

This almost certainly will be the last big tariff-trimming operation for years to come. World tariff levels by now have probably been shaved very close to the politically possible minimum. The Geneva tariff conference thus rounds off an era-beginning with passage of the Reciprocal Trade Act in 1934-during which U.S. tariffs have been steadily whittled down.

The question now is whether the general movement toward freeing trade will continue, or whether there will be a widespread retreat toward protectionism and economic nationalism. The answer will depend largely upon the evolution of our own trade policies.

• OTC the Key-The future hangs primarily on the fate of Pres. Eisenhower's proposal now before Congress for U.S. membership in the proposed Organization for Trade Cooperation (OTC). The organization would administer and police the General Agreement on Tariffs and Trade (GATT).

Here's why U.S. acceptance or re-

jection of OTC is crucial:

GATT has been the framework within which international tariff cutting has been carried out since the war. It also embodies a set of general trading rules designed to prevent countries from using other curbs to nullify tariff con-

As GATT's tariff-cutting role ends, the emphasis shifts to this second role. Its new task is to attack the other trade barriers, and to provide effective enforcement of fair trading standards among its members. Both protectionists and freer traders agree that this probably cannot be done without a permanent, full-time administrative organization. And that's what OTC is designed

There is also general agreement that if OTC is stillborn-which it would be without U.S. participation-a piecemeal repeal of tariff concessions under national protectionist pressures will result.

In the U.S., protectionist opposition is growing under the spur of revived competition from Europe and Japan. The shift of industry to the South has sapped traditional Southern support for free trade policies.

· Protectionist Gains-The strength of the protectionist resurgence can be seen

in these developments:

· Eleven industries are appealing to the Office of Defense Mobilization for special protection from foreign competition on the ground they are essential to defense. A subcommittee of the Joint Congressional Committee on the Economic Report is holding hearings (BW-Jun.2'56,p143) to chal-lenge the whole concept of "defense essentiality" and to prod the Administration to define it. The ODM so far has refused a general ruling, and will conduct case by case hearings before taking a stand.

• The cotton textile industry has been seeking a quota on Japanese imports of cotton textiles, and threatens to use its political power in Congress to kill OTC if it doesn't get its way. The Administration so far hasn't given in, but it has tried to compromise by urging the Japanese to create through government action, cotton textile export cartels, thus effectively setting up export restrictions and quotas. The U.S. cotton textile industry has not been ap-

peased, however.

• The drive for import quotas as a more effective substitute for tariff protection has been gathering steam for some time. There is an omnibus bill for an across-the-board quota-setting system, in addition to legislative proposals for quotas for specific industries, notably the oil industry. The first major breakthrough on the quota front came when an amendment was attached to the farm bill slapping a quota on im-

ports of long staple cotton.

• The "escape clause" of the Trade Agreements Act, providing for tariff protection when industries are threatened with injury from foreign competition, was broadened last year. · Fighting Chance-It's difficult to assess the chances of OTC at this stage. Most observers agree that if the legislation fails to pass the House this year, it will be dead for good. There probably isn't enough time left this year for Senate action, but if the House approves it, the Administration would have a fighting chance next year.

· Growing Stake-Despite the resurzence of protectionism, there are strong forces pushing in the other direction. For one thing, the U.S. stake in expanding foreign trade is growing steadily. U.S. exports now account for about 20% of world trade, and imports for over 14% of world trade. Exports last year were 3% of gross national product-5.1% if you include military aid. Farm exports represent an annual output of 50-million to 60-million acres -equivalent to the cultivated acreage of 10 Southern states.

Exports absorbed over 11% of industry's total output last year, compared to 8% the year before. They also accounted for over one-fourth of the production of the coal industry (page

Finally, the switch in Russian strategy from military to economic warfare should spur the U.S. to compete more

actively.

· Effect on Trade-It's impossible to establish a direct relationship between tariff concessions and trade expansion. But the following figures give some guide lines on how tariff cutting has affected U.S. trade.

· GATT members have negotiated concessions on some 60,000 trade items; last year, U.S. exports and imports of these were worth about \$14-

billion.

 The U.S. has granted tariff concessions on over 3,000 imported items, which account for over 90% of all dutiable imports.

· Tariff concessions granted by other countries now apply to more than

50% of U.S. exports.

• Breaking Barriers-Progress has also been made in removing other trade barriers under GATT. In 1953 only two out of 13 Western European countries had relaxed their quantitative restrictions on dollar imports. Now 11 of the 13 have loosened restrictions, and eight have freed more than 50% of their dol-

Scores of complaints against trade abuses have been settled within the GATT framework. The U.S. alone has won satisfaction in more than 20 cases.

However, it is estimated that because of the continuance of other barriers, U.S. exporters so far have got the benefit of only about 50% of the tariff concessions won from other countries. This is where GATT's new round comes in. END





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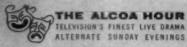


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# INTERNATIONAL OUTLOOK

BUSINESS WEEK JUNE 16, 1956



Congress has the Administration on edge this week over two major pieces of foreign policy legislation—the Foreign Aid Bill and the bill to permit U. S. membership in O.T.C. (Organization for Trade Cooperation).

Both bills were bound to run into stiff opposition on Capitol Hill. But with Pres. Eisenhower temporarily out of action, the sledding has become especially tough. Administration strategists had counted on personal pressure from the President to (1) get the Senate to restore better than half of the \$1-billion cut in aid made by the House; and (2) push the O.T.C. bill through the House—as a gesture—during this session.

At midweek Administration hopes on aid were still fairly high. But it looked like a toss-up whether O.T.C. would even come to a vote in the House.

The hassle over North Atlantic air fares (BW—Jun.9'56,p36) appears on its way to settlement. A 14-member working committee of the International Air Transport Assn. meeting in Cannes has come up with a compromise: a \$450 round-trip excursion ticket, New York to London, limited to 15 days. (The on-season tourist fare is now \$532.) The new tariff would apply to regular tourist aircraft until new planes—fitted out to carry more passengers—are available as a new third-class service.

The plan calls for putting the ticket on sale Oct. 1. That would meet the deadline Civil Aeronautics Board set for the U.S. carriers when it ordered them this spring to come up with a new lower fare by fall. The compromise also meets the CAB's longtime demand for a third-class service.

Argentina's military government has come out of last weekend's bloody revolt stronger—at least over the short run.

For months it has tried to cajole the remnants of Peron's dictatorship into a common effort to rehabilitate the country. The revolt has ended this policy. Now the government is prepared to use military law and firing squads to stamp out Peronista influence.

Much depends on how soon the government is able to get the Argentine economy back on its feet. The new tough policy probably means Buenos Aires will move faster to implement the line recommended by its economic czar, economist Raul Prebisch (BW—May26'56,p123). Prebisch wants a return to free enterprise and the kind of sacrifices that won't be popular.

A part of his program has got off the ground. Buenos Aires has talked 11 European creditor nations into amortizing its debts and setting up a multilateral payments union.

Now a mission arrives in the U.S. this weekend to start negotiations for government and private loans needed for heavy capital investments.

Dimitri Shepilov, new Soviet Foreign Minister, will be touring the Middle East late this month—stirring up new trouble for the West in Egypt, Syria, and perhaps Greece.

Shepilov's chief aim probably is to nudge Cairo over into the Soviet camp. According to European reports, he will try to sell Premier Nasser on having the Aswan Dam built as a joint East-West enterprise.

This kind of coexistence deal might look tempting to Nasser—if only the West would go along. But both Washington and London already have turned thumbs down on any such scheme. And Washington feels this week that Nasser won't risk an open break with the West over Aswan.

# INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK JUNE 16, 1956 There's complete confusion in Western Europe's Communist parties now that Khrushchev's exposure of Stalin has been published.

Until last week top party leaders—the only ones in the know—wrangled among themselves about Khrushchev's secret speech at the 20th Communist Party Congress. For example, Italy's Togliatti came back from Moscow criticizing Khrushchev for his irresponsibility in attacking Stalin so violently. French Communist leaders, especially Thorez, took about the same line in top party councils.

Now that every Communist is in the know, the fat is in the fire. Rank and file party members are asking two questions: (1) How did Communism produce such a monster as Stalin? and (2) Why were our party leaders taken in for so long?

Party leaders in Italy and France—and in Britain and the U.S. for that matter—have no comeback to these questions. What's more, Moscow is so wrapped up in its own de-Stalinization problems that it can't provide any ideological leadership.

In Eastern Europe the confusion is equally great. The governments in Romania, Hungary, Czechoslovakia and Albania are soft-pedaling the whole anti-Stalin business.

Washington is worried about Japan. The weak Hatoyama government—split by bitter factionalism—is likely to establish diplomatic relations with Russia before the end of the year—and pretty much on Moscow's terms.

From there it will be an easy step for Tokyo to recognize Peking—something that wouldn't go down well in Washington.

The battle here over imports of Japanese cotton textiles (page 158) doesn't make for easier U.S.-Japanese relations. Tokyo complains that protectionist laws being adopted in states like South Carolina and Alabama violate U.S. treaties with Japan.

Thanks to Chancellor Macmillan's intervention, the 1956 Anglo-American tax squabble (BW—May12'56,p28) has ended amicably.

In the current British finance bill there was a provision that would have forced all foreign residents to pay full British tax rates on all their income, not as at present just on income transmitted to Britain. This would have hit Americans working in Britain for U.S. companies especially hard, made it impossible for many an American to stick with his job there. In fact a dozen or more U.S. enterprises would have moved their headquarters to the Continent if the proposed ruling had gone through.

It was this fact that led Macmillan to change the clause in his finance bill—though it would have done no more than bring British practice into line with American tax rules.

Macmillan's tough credit policy finally seems to be bringing Britain's international payments into balance.

In May the deficit on merchandise trade (Britain's imports are always higher than exports) was less than during any month since October 1954. Record exports to the U.S. and Canada accounted for a lot of the gain.

If the Conservative government now stands firm in resisting general wage increases—even at the risk of a strike wave—Britain should be out of the woods by year's end.



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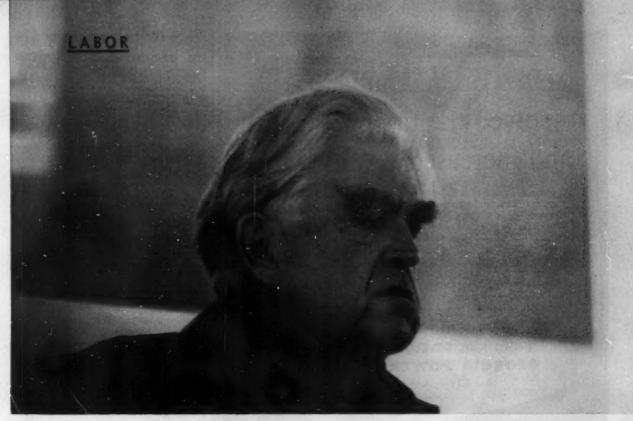
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There's a new spirit of amity in AFL-CIO; it's so broad that it extends even to labor's inveterate feudist, John L. Lewis—and . . .

# Lone Wolf May Rejoin the Pack

John L. Lewis may be bringing his United Mine Workers into AFL-CIO.

Matthew Woll of the Photoengravers Union died two weeks ago. Woll was an AFL-CIO council member, first vice-president of the AFL, and, except for Lewis, the last remaining labor hierarch to span the union movement's history from Sam Gompers' time to the present.

Three days after Woll's death, the AFL-CIO council in session in Washington named a committee of three to propose his replacement. Only hours later, David Dubinsky of that committee was lunching with Lewis at the Carlton. It was an overture and there will be a follow-up.

• In and Out—Peripatetic Lewis has three times walked out on his labor peers: twice from the AFL, once from the CIO. His first movement was to lead a group of dissident AFL unions into the CIO of his creation. His second was to pull out of the CIO when Wendell Willkie was defeated in 1940 over his appeals to workers to retire Franklin D. Roosevelt from public life. He also objected to CIO's pro-defense policies as World War II

began. After an interlude in isolation, he took his miners back into AFL, leaving again when AFL refused to join him in a boycott of the Taft-Hartley Act. His withdrawal in 1947 was achieved through a classic in terse, concise communication: A four-word letter to the AFL president that read, "Green, we disaffiliate. Lewis." Green's response, never printed, was a four-letter word.

There is real significance in AFL-CIO's willingness to consider taking the old tartar back. It means that, despite its well-publicized feuding, the six-months merged AFL-CIO feels solid enough to invite the greatest feuder of them all back to the table.

• Friendship First—The new feeling of solidarity was evident as the 29-man AFL-CIO council met last week. The session started out with a 19-point agenda—each point a problem that, if fought out, could tear the organization apart. It ended in amity—but with virtually none of the problems settled.

With all present standing by to let the most troublesome issues be swept under the rug, the merged federation was behaving just like the two organizations it joined together. The fire and fervor that enlivened the two earlier meetings of the council were absent. Nobody was being troublesome, nobody was being heroic. Everybody relaxed.

• Sidestepping—While the relaxed posture means that the AFL-CIO is

shaking down, it also means that it's going to live with some of its major problems unsolved. The council took only routine action on some of the most acute issues before it. Among these were:

Teamsters-ILA. No. 1 item on last week's advance agenda was a discussion of mutual aid pacts between AFL-CIO affiliates and unions expelled from the united labor movement. This was prompted by the alliance between Dave Beck's Teamsters and the ousted International Longshoremen's Assn.—an alliance that had already been disbanded in the face of strong AFL-CIO opposition.

But while the pact had a priority rating on the printed program, it got short shrift in the meeting. Pres. George Meany didn't press it any further when Beck termed the Teamsters-ILA pact "dormant," and none of

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AFL-CIO starts on p. 165

the other council members made it an issue.

Craft vs. In strial. The continuing jurisdictional between the AFL-CIO Building Trades Dept. and the industrial unions also got little attention, and no suggestions for solution.

While Building Trades Pres. Richard J. Gray waited in his office two floors below the council meeting, a hoped-for invitation to come and state his case never arrived. Instead, Gray was notified that Meany would appear before the 19 craft union presidents this week to demand once again that the building trades cease their campaign of opposition to state mergers.

By this removal of the issue from the council, Gray lost a major sounding board. He had prepared a list of 18 current cases where industrial unions were fighting craft unions over job rights to construction and maintenance work in factories. It was this fight that led the building trades to boycott merger programs of state AFL and CIO

The building trades' stand, in turn, angered Meany to the point where he advised Gray no action would be taken on the issue by the council until the boycott was called off.

Organizing. Impatient at the conflicts between rival unions that have stalled the merged federation's proposed organizing drive, the council stepped in to demand action in the textile field. There are some 700,000 nonunion textile workers, and the council focused its action on that field by ordering the campaign to get under way—despite failure of the federation's two textile unions to reach a jurisdictional settlement.

Acting on the plan of council member Emil Rieve, president of the Textile Workers Union, the council committed the AFL-CIO Organizing Dept. to aid in the drive. With no settlement between Rieve's union and the United Textile Workers, this presumably means Rieve will get the first help. The action reverses the original council position that conflicting unions would have to settle jurisdictional rows before the AFL-CIO would help out.

At the same time, the council voted a 1¢-a-month dues increase to raise some \$2-million to ease the AFL-CIO operating deficit, which is due in part to carrying 300 organizers on the payroll. This apparently means that the proposal of United Auto Workers Pres. Walter Reuther for million-dollar sup-

port from the various unions for organizing isn't going ahead.

Corruption. After being in business five months, the AFL-CIO Ethical Practices Committee was given its first assignment. The council turned over to it for investigation the records of the Senate Labor Subcommittee's probe into union welfare funds, and asked recommendations for any action that should be taken against the unions exposed—the former AFL laundry and auto workers unions and others.

The council also delegated to the ethical committee its authority to initiate investigations, but held control of the penalty machinery. The committee, under Machinists Pres. Al J. Hayes, plans hearings in a few weeks

on the welfare fund cases.

Politics. Also high on the advance agenda was the question whether to call a special convention to endorse a Presidential candidate for the coming national elections. Following a meeting with AFL-CIO political experts, the council delayed this move until its next session in August.

Reports of general Democratic apathy, and pessimism on the party's chances against the popularity of Pres. Eisenhower, left council members less than enthusiastic about stepping feet

first into the campaign.

The decision was to wait and see what comes from the two national conventions, and assess the political situation at that time. If there's no significant change from the present, and Eisenhower's second illness doesn't affect his candidacy, it's more than likely that the AFL-CIO will sit out the Presidential campaign this year.

· Moving Cautiously-Thus, as the council nears its first half-year mark, it already bears striking resemblance to the policymaking groups of the two organizations that made up the new federation. It's a major change from the council's first sessions, where the unity cause carried with it some of the intenseness and fervor that go with new crusades. Now, the 29-man council is calmly at work.

Whatever action it takes, the group reflects the leadership of George Meany. While Meany has stepped in to take over more authority than any other union leader ever held, he is moving slowly to avoid concerted opposition.

This means the AFL-CIO will move slowly, too. This may surprise some who watched Meany's first moves and envisioned a new crusade.

In reality, it means the new federation has shaken down into a working organization, where its autonomous unions rule the roost. Meany, while he picks and chooses new openings to move in and take charge, still basically must preserve his job and the federation through the mediator's role. END



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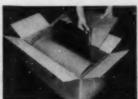
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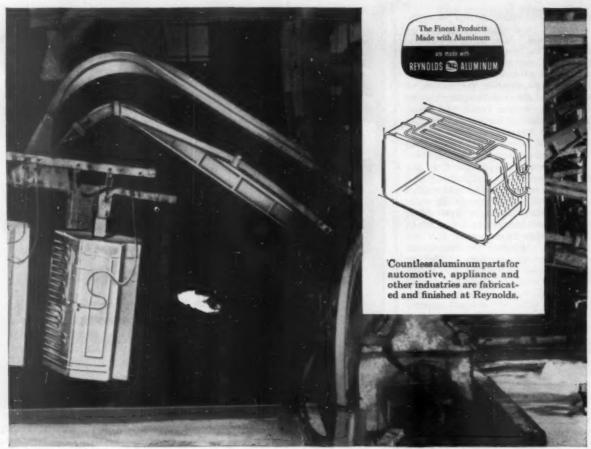
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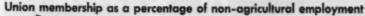
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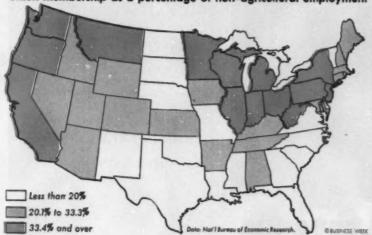
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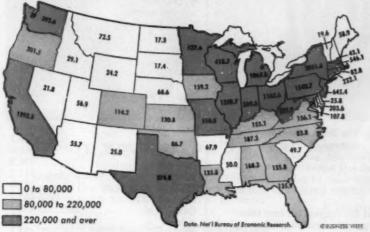
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# The Geography of Union Membership

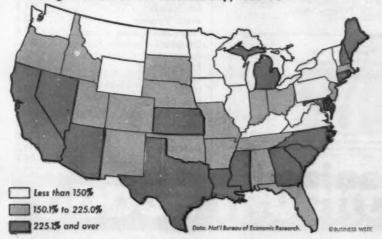




### Union membership (in thousands) by state



### Percentage increase in union membership, 1939-53



This week the National Bureau of Economic Research released a preview of a study that goes a long way toward filling an important gap in labor statistics. This gap results from the fact that until now there have been no scientific efforts to break down union membership on a state-by-state basis. Now, using 1939 and 1953 member-

Now, using 1939 and 1953 membership figures, NBER researcher Leo Troy shows how many unionists are in each state, what percentage of nonfarm workers are unionized in the states, and what shifts in extent of unionization took place between 1939 and 1953. Findings of the project appear on the maps at the left.

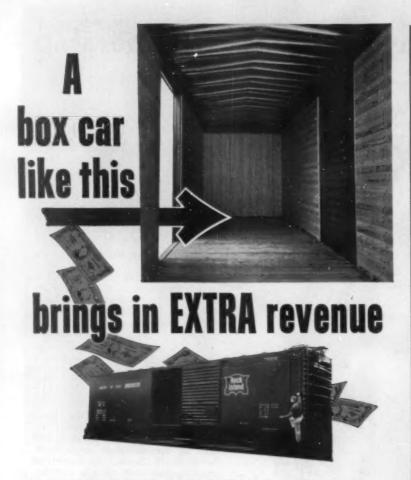
• Westward Shift—The population center of unionism has shifted Westward. The East North Central region—Illinois, Indiana, Michigan, Ohio, and Wisconsin—shows more union members than any other region. It also has the highest degree of organization. This trend throws a significant light on the relationship between the movement of manufacturing employment, which has tended to this area, and union membership.

Other states—California and Texas particularly—also showed strong increases in union membership along with rises in manufacturing employment. But in North Carolina, the number of unionists rose even though manufacturing accounted for a smaller share of jobs in 1953 than in 1939. This suggests that while rising factory employment is an important factor, it is not the only one behind swelling union membership figures.

This fall, the entire study will be available. It will deal with a number of other phases of union membership data including a breakdown of union strength by industry, statistics that employers have long awaited.

• Sources of Data—NBER's research supplements data on union numbers compiled by the unions themselves; the Dept. of Labor's Bureau of Labor Statistics; Dr. Leo Wolman's pioneer work in this field, begun in the 1920s, sponsored by NBER.

Union membership figures—even those as carefully analyzed as NBER's—are, at best, estimates. For strategic reasons, unions may understate or overstate their numerical strength. To winnow out as much of this in accuracy as possible, Troy crosschecked his information with several sources. He relied mainly on per capita dues receipts from international unions, convention credentials committees, AFL-CIO convention reports, and inquiries to unions. All figures in the study are



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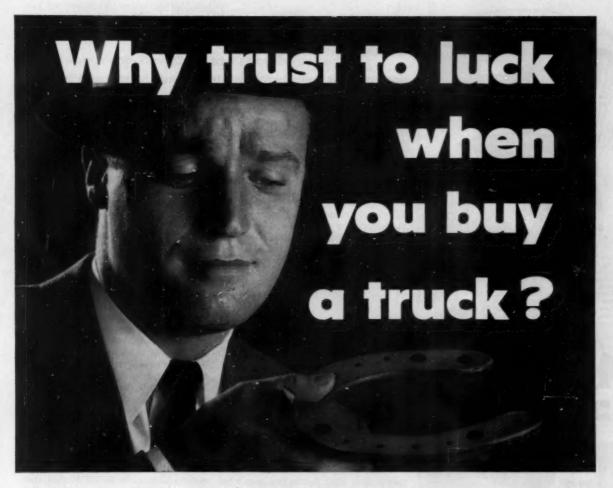
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• Unorganized Workers—An offshoot of the NBER project indicates where most nonunion workers are to be found. AFL-CIO organizers say their big target will be the South, but that they'll also work in the North. Clearly, there are far more unorganized workers in such states as New York, Pennsylvania, and California than there are in Southern states. That's why union recruiting will not be confined to any one section of the country. The table below shows where unions have their work cut out for them.

# Distribution by States Of Nonunion Workers

(Figures in Thousands)

New York	2 921 2
New Tork	2 502 0
California	. 2,302.8
Pennsylvania	. 2,318.8
Illinois	. 2,052.7
Ohio	1.945.7
Texas	1 853 1
Michigan	1 303 1
Massachusetts	1 260 5
Massachusetts	. 1,207.3
North Carolina	928.2
Indiana	854.0
Missouri	781.5
Georgia	770.4
Virginia	744.1
Florida	699.8
Wisconsin	675 1
Connecticut	647.2
Connecticut	O47.2
Tennessee	644.5
Maryland	603.9
lowa	573.8
Louisiana	560.6
Minnesota	538.3
Alabama	511.6
South Carolina	482 8
Kentucky	463.7
Oklahoma	452.2
Okianoma	415.6
Kansas	
D. C	401.1
Washington	342.4
Colorado	298.0
Mississippi	291.5
West Virginia	282.1
Nebraska	279.6
Oregon	
Arkansas	249 2
Rhode Island	210.6
Maine	
Utah	159.6
New Mexico	153.1
Arizona	146.7
New Hampshire	132,7
New Jersey	118.8
Delaware	. 114 2
Idaho	105.8
South Dakota	103.6
North Dakota	0.00.0
Vermont	
Montana	81.7
Wyoming	63.3
Nevada:	49.3



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# Steel's Decisive Deadline

Technology dictates that steel's work-or-shutdown decision come 48 hours before contracts end. So pressure is on for fast settlement to avoid last-minute trouble.

The steel contracts run until midnight, June 30. So it's widely assumed that expiration date sets the deadline for a work-or-shutdown decision. Actually, it doesn't. Whether there will be an interruption of steel production can't be decided in the last few hours of the present contracts' life. The decision must come well in advance, and the negotiators don't have all the time that the contract would appear to provide.

The reason for the earlier deadline is inherent in the technology of steel-making. Basic mills can't be shut down on short notice. So bargaining must take account of these practical, realistic deadlines:

• If there is no contract agreement by midnight, June 28, the steel industry must begin then to curtail operations.

 Once started, curtailment must be continued over a period of 48 hours, as various production cycles are completed.

 If there's no agreement before 4 p.m. on June 30, it's possible that production will cease then in all USW-organized steel mills.

A decision to slow down—and ultimately stop—steel production won't be taken lightly. It's expensive to close a mill and start it up again. The lost tonnage is just a part of it. There are other hefty technical costs, and there are genuine dangers to workers and to equipment in shutting down and then restarting a mill.

• Preparing a Shutdown—Steelmaking processes are carried on at very high temperatures, and on a continuous or semicontinuous basis. They cannot safely be ignored in mid-cycle.

First preparations for a shutdown are made in the coke department. These ovens can be slowed down, but they cannot be stopped without ruining the refractory linings.

A blast furnace needs to be charged heavily with coke and limestone about 10 hours before shut-off time. Then, when emptied of iron and slag and sealed tight, it will stay hot for weeks—but a week's work is needed before it will be ready to produce acceptable iron again.

The open hearth furnace operator has two choices once he empties the furnace: If he foresees a short strike, he burns gas to hold the temperature at about 2,000F; for a longer strike, he lets the furnace cool.

Bessemer converters can be emptied and turned nose-down to keep moisture out and heat in. Metal mixers, soaking pits, and mill furnaces can all be emptied and sealed.

Those are some of the reasons why the steel negotiators are pressing their contract talks so seriously this week.

• Bitter Memories—The companies are determined to avoid being caught by sudden work stoppages, as they were in 1952.

That year, steelworkers twice violated what was considered an ancient tradition of their industry—that men on duty never leave their jobs until mills have been made harmless and equipment has been adequately protected.

• 1955's Stoppage—Last year, when negotiations dragged on and no settle-

negotiations dragged on and no settlement was in sight, mills began shutting down operations on the 48-hour schedule. As a result, the industry was down hours before a midnight deadline. A settlement was reached at 3:30 a.m. on July 1, so records show the stoppage as only a 3½-hour strike. Steel mill operators snort if you call it that. For them, not just hours but days of effective production were lost.

Early this year, steel industry negotiators made clear to USW that they wanted (1) all union demands spelled out fully early in 1956 bargaining, and (2) negotiations aimed at a settlement early enough to avoid any slowdown or shutdown of production. Present contract talks in New York are aimed toward that.

• Behind Scenes—The bargaining is, ostensibly, being handled by an eightman committee—four of its members from USW, two from U.S. Steel, and one each from Bethlehem Steel and Republic Steel. But a large and intricate pattern of negotiations, involving organizations of staff personnel and bargaining aides, is going on quietly behind the "front" of the eight-man conferences.

Departmental offices of the companies and the union are spread out in suites in a number of Manhattan hotels—set up hurriedly with batteries of telephones, computors, and other electronic office equipment. And while public attention is focused on bargaining in the presidential suite of the Hotel Roosevelt, most of the real work up to midweek was being done in other conference rooms by subcommittees.

The negotiations under way in this manner—as an experiment, according to

the companies and union-are intended to reduce the outside pressures on contract talks, the parties say. But they do not alter the fact that the technology of the basic steel industry is a hard internal pressure for a fast settle-

This midweek, the "Big Three" steel companies made counterproposals to USW. In connection with the industry's first concrete answer to union demands, USW's wage-policy committee converged on New York late in the week. Optimism over the possibility of a settlement rose. However, the steel union has frequently in the past made strategic use of the 170-member committee in building up mid-bargaining pressure on employers.

# **UE Loses a Key District** As Locals Shift to IAM

The beleaguered independent United Electrical Workers has lost another major slice of its membership. Last week, 13 of 15 locals in UE's former stronghold, District 3 in Upstate New York, voted to shift to the International Assn. of Machinists. This second large defection in a month cut UE strength to an estimated 50,000.

· Attrition-Before being thrown out of CIO for following the Communist line too closely, UE had a peak membership of 450,000 to 500,000. Constant pressure from CIO's International Union of Electrical Workers, AFL's IAM, and other unions reduced UE membership during the past seven years from a post-ouster 250,000 to fewer than 100,000.

A month ago, UE's important District 4 in the New York City-Newark metropolitan area switched to IUE. The change, accomplished smoothly, involved 13 locals that claim to represent 18,000 workers in 173 shops

Last week, the bulk of UE's District 3-13 locals representing some 8,300 workers-left UE and moved into IAM. Two groups in General Electric plants, representing about 1,700 workers, are staying in UE "for the time being" to protect contracts.

National Labor Relations Board elections, won by UE, were held at these plants in February and March. Under NLRB rules, another vote can't be taken until early 1957. Unless "legal alternatives" can be found, according to District 3 secessionists, the recent NLRB elections raise "obstacles [that] leave the final decision in the two plants to next February and March." IAM is confident that it will get both in 1957. As in the case of IUE and District

4 officers, IAM agreed to give jobs to all former UE staff members in Dis-

trict 3. END



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WHEN BUSINESS MEN WANT BUSINESS NEWS THEY TURN TO BUSINESS WEEK

# In Labor

# Montgomery Ward Switches On Union Security

Montgomery Ward & Co. signed a new labor agreement with the Teamsters last week, covering 14,000 mail order workers and 3,000 retail store employees across the country.

Under Sewell Avery, Ward opposed any form of union security. The new contract moves away from this policy; it provides for "maintenance of membership." This means union members as of June 1, 1956, must stay in the union until the contract expires on June 1, 1957. The company also agreed to a dues checkoff.

According to the union, pay hikes average more than 91¢ an hour. Ward also agreed to a new voluntary insurance plan, replacing a compulsory one.

Meanwhile, the Retail Clerks International Assn. has launched a nationwide boycott against Ward and filed NLRB charges that the company refuses to bargain with RCIA for its clerks.

# UAW Marks 20th Anniversary With Speeches, Festivities

Last week marked the 20th anniversary of the United Auto Workers. And UAW did up its birthday celebration in a big way with speeches, banquets, a nationwide telecast.

Walter Reuther, UAW president, in an interview with the Detroit News, used the occasion to make these remarks:

• "I believe the Democratic Party can win in 1956 only if it . . . will take the essential motivations of the New Deal and the Fair Deal . . . and project them into the future."

• "... the UAW favors automation and advancing technology."

 "Autos should be priced like strawberries to avoid dips and peaks in production; if you want a car when demand is high, you'll have to pay a premium like you do for strawberries in February."

 "On the GAW or SUB, there is no question that we're going to raise the benefits."

### Labor Briefs

A wildcat strike idling 2,000 coal miners in U.S. Steel's Robena (Pa.) mine erupted at midweek in the face of a warning by the United Mine Workers executive board that such strikes would bring "double penalties." Meanwhile, another wildcat involving 8,300 West Virginia miners was ending.

In aircraft settlements this week, the Machinists (1) O.K.'d a two-year pact ending a 114-day strike at Republic Aviation Corp.'s Long Island plants, calling for a 7¢-an-hour boost each year, improved welfare and vacation benefits; total cost-17½; (2) signed another two-year contract with Boeing Airplane Co. on the West Coast granting a 5% pay hike the first year, 7¢ the next.

AFL-CIO merger attempts in Mississippi failed last week when the State Federation of Labor voted 124-96 against coalition. The state CIO body cast only one negative vote. AFL and CIO groups in nine states now have merged.

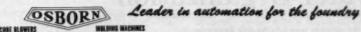
)RN. behind the name experienced application knowledge SHAKEOUT WHY YOU SHOULD SPECIFY...OSBORN

Experienced Application Knowledge makes sure you get the most out of automatic equipment

• "How can I apply automation to my production set-up?" Only men long experienced in improving foundry methods can give you sound application advice.

"Will I get all the production possible?" Again, Osborn's 50 years of experience in both short run and mass-production applications assures peak performance.

Have your operations analyzed by the men who have led the field in the use of automation . . . Osborn application engineers. Call or write The Osborn Manufacturing Company, 5401 Hamilton Avenue, Cleveland 14, Ohio.



TWO OTHER IMPORTANT REASONS



ADVANCED ENGINEERING - Osborn engineering draws on 50 years of practical experience developing methods and designing machinery to increase your production . . . lower your costs



QUALITY MANUFACTURE - Osborn craftsmen are experienced in manufacturing foundry machines that assure dependable performance . . . day after day.

# "When ideas take shape, that is progress and it is progress I have to report."



BOWATERS SOUTHERN PAPER CORPORATION MILLS ADD THIRD NEWSPRINT MACHINE AT CALHOUN, TENN

### **Record Bowater Earnings**

"Earnings for 1955-totalling more than \$36,960,000-exceeded those of the previous fifteen months, which in themselves had been a record. As a result the directors recommended a final dividend of 7½ per cent (21 cents) per common share capital which was increased by last year's financial reorganization to 19,200,000 shares of £1 each. A large part of these earnings derived from North America, where more than 50 per cent of the Organization's assets are now located. In addition to its North American and British interests, the Organization also has important interests in Australia, Sweden and Norway. The higher earnings reflect the greater production of our plants throughout the world, as well as the vast capital sums we have spent since the war on further development of existing properties and construction of new plants.

### Progress in Packaging, Sales, Ships

"Associated Bowater Industries Limited, our packaging subsidiary, plans another corrugated case factory in North England, and a new site is being acquired near London for the future erection of factories for corrugated cases and fibre drums. Negotiations are well advanced for the merger of Bowaters Fibre Containers Limited with Eburite Corrugated Containers Limited. The pulp mills in Norway and Sweden continue to work to capacity and are scheduled for expansion.

'Sales companies in Britain, Australia and South Africa all enjoyed a successful year, during which the Australian company acquired the British-Australian Paper Company, an undertaking of wide conversion interests and capable of early and profitable development. The Bowater Steamship Company Limited has two ships in commission, a third due for completion in the coming year and five more to follow at short intervals."

**Bowater-Scott Partnership** "Of special interest is the recently arranged partnership with Scott Paper Company of

Chester, Pa. to form the new company of Bowater-Scott Corporation Limited. In addi-tion to operating the Organization's existing tissue factory in Britain, the new company is receing a manufacturing and conversion plant. This new venture, enjoying the full benefit of Scott 'know-how' and patents, is of top importance. The U. K. market for this type of product has hardly been touched."

### **Newsprint Demand—and Supply**

"Demand for newsprint-still by far the largest in volume of Bowaters' products—appears insatiable. Consumption in the U. S. alone was 7.7 per cent over the previous year. Much new productive capacity is planned in Canada and the U. S. as well as in Britain, and I hope that by 1958 or 1959 the present unbalance between supply and demand would be eased.

"Inevitably, sharp rises in production costs over the past decade have been reflected in newsprint price increases. But these increases are less than circumstances might have justified. In my opinion, the newsprint industry has shown the greatest restraint in its pricing policy. This year's very modest increase of \$4

per ton was the first for 3½ years.

"To secure essential supplies of pulp for increased newsprint production, the Bowater Organization, in addition to enlarging pulpmill capacity in Scandinavia, Canada and Britain, has decided in principle to construct a new groundwood pulp mill in Canada with an annual capacity of about 100,000 tons."

### North American Review

The Bowater Corporation of North America Limited in Montreal consists of the Newfoundland Pulp and Paper Mills and The Bowater Power Company at Corner Brook, Bowaters Southern Paper Corporation and Bowaters Fibreboard Company Inc. in Tennessee, and the Bowater Paper Company of New York, distributor of the entire North

American production. "Earnings of \$22,579,000 in 1955—an increase of about \$5,500,000 over the previous

15-month period-were mainly due to the Tennessee Mills completing a full year's operation. Earnings of other subsidiaries are also running at a satisfactory level. The Corner Brook Mills operated at their highest rate of production ever, and capital expenditure on plant improvement for the current year has been budgeted at \$4,500,000. The newly formed power company is supplying a grow-ing demand for electrical energy in Western Newfoundland, and a further hydro-electric plant at Corner Brook is to be installed im-mediately at an estimated cost of \$2,500,000."

### Tennessee Expansion

"During the year, the Tennessee Mills reached an annual production rate of 200,000 tons of newsprint and 75,000 tons of sulphate pulp. The new number 3 machine, which will be in operation before the end of this year, will raise newsprint capacity to more than 300,000 tons. A fourth newsprint machine is now under serious consideration, and its production has al-ready been sold on an 'if and when' basis.

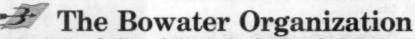
Bowaters Fibreboard Company Inc., was formed last November to set up a new \$4,500,000 fibreboard mill in Tennessee, with an annual capacity of 120 million square feet of building board."

### **New Mill For South Carolina**

The increased demands made by the number 3 newsprint machine on existing pulp resources, with perhaps a fourth machine to come, coupled with the growing requirements of Bowater's mills elsewhere, have culminated in a decision to embark immediately, subject to local authorities' consent, on building an entirely new sulphate pulp mill near Rock Hill in York County, South Carolina, where an ideal site on the Catawba River has been located. At a later date, a mill for manufacturing packaging papers may be undertaken on the same site. Like other North American developments, the new pulp mill will be financed from North American resources.

### The Economic Scene

"I do not think the paper industry should be unduly affected by the recession evident in certain other industries. In the United Kingdom we continue to enjoy full employment while in the United States recent figures of unemployment, despite the recession in a few industries, were at a low ebb, and the total number of people engaged in industry greater than ever before. The credit squeezes in both countries —provided they are intelligently handled, as I have no doubt they will be—should do no more than check undesirable inflation. I have heard of no curtailment in plans made for the further development of industry in the United Kingdom, the United States and Canada. On the contrary, in all these countries, and par-ticularly the United States, new factory and plant construction is still running at the highest level of all time.



For copies of the complete speech by Sir Eric Bowater write:

Secretary-Treasurer, The Bowater Corporation of North America Ltd., 1980 Sherbrooke Street West, Montreal 25, Quehec,

# Wall St. Talks . . .

. . . about thin market in commons . . . du Pont secondary . . . higher costs abroad . . . broker's profits.

Friday's sharp sell-off illustrated again how painfully thin the market in so many commons has become lately. On that day, 61 prominent issues (average price: \$76 a share) showed an average drop of one point between sales, a maximum decline of 3½ points, and an average loss of 2½ at the close. Cause of these sharp gyrations, says Hemphill, Noyes & Co.'s Harold Clayton, was trading that involved only 198,000 of all the 363-million shares the group has outstanding.

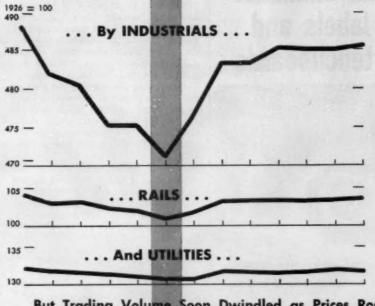
That recent 42,000-share du Pont secondary offering, which excited so much curiosity at the time (BW-May 26'56,p181), is now reported to have involved stock long held by a large insurance company. To date the sale has proved to be a smart move; disposal of the block early this week would have brought the seller only some \$8.6-million, against the \$9-million-odd actually received in late May.

It's not only domestic companies that are plagued these days by higher operating costs and the like (BW-Jun. 9'56,p161). For example: Europe's largest electrical equipment manufac-turer-Holland's N. V. Philips' Gloeil-ampenfabricken-reported only a 3% first-quarter gain in net profits despite a 10% sales jump. The reason: Its pretax profit margin slid to 10.1% from 11.1% a year earlier. It had some other familiar comments: (1) Inventories "show a slight rise in relation to sales;" (2) "the average credit term for receivables" is lengthening; (3) "liquid assets have fallen."

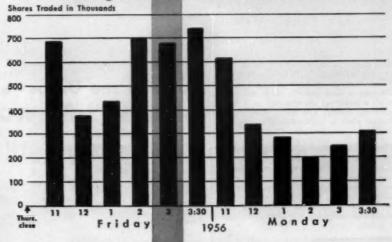
1956 brokerage house profits will dip sharply under 1955's bonanza levels unless stock trading activity soon rises sharply. So far this year, Big Board volume has averaged only some 2.4-million shares daily (only 1.9-million a day in early June), against 2.9-million in the same 1955 weeks.

Latest rumor denial: Safeway Stores Chmn. Robert A. Magowan says it's not true, as rumored, that he's had prolonged merger discussions with Pres. Harley V. McNamara of Na-tional Tea—"and no one else at Safe-way has." Says Magowan: "I've never even met the man.'

# The Latest HEALTH CRISIS, Hour by Hour Friday's Losses Were Quickly Recouped . . .



# . . . But Trading Volume Soon Dwindled as Prices Rose



Data: Standard & Poor's Carp. Daily Stock Price Indexes; New York Stock Exchange.

# Comeback Without Spark

Once again the stock market finds itself unwillingly at the mercy of the doctors. Pres. Eisenhower's "stomach-ache" turned into a major operation and blasted the stock market into its worst nosedive since Oct. 10, 1955, when the President's heart attack wreaked havoc with stock prices.

The "ileitis market" has recovered from its one-day sell-off, just as the heart

attack market did. But you won't find much enthusiasm in Wall Street for the recovery. Few experienced Streeters will now bet that there will be any recovery of the magnitude of the earlier one, which brought new bull market highs within six weeks of the post-heart at-

· Weak Volume-A big reason for the lack of confidence in this week's recov-

# Weber shipment system can eliminate labels and stencilboards



### Modern addressing system cuts costs, speeds shipments

The Weber "ship-to label frame" system is the most efficient method of addressing multiple container shipments. Time and cost studies made by present users indicate that this method is far faster and more economical than using labels or stencil-boards.

Customer's address is imprinted directly on carton within a "ship-to" label frame that has been pre-printed on the cartons. Addressing is done quickly, easily and neatly with a small stencil attached to a hand duplicating device. The sharp, waterproof, fadeproof print is enthusiastically approved by carriers.

Stencil Integrates with Paperwork

Weber stencils can be cut on typewriter, automatic tabulating equipment, Flexowriter, Teletype machines and other modern office equipment as part of order-invoice writing procedure. Get full details on efficient Weber systems for addressing and marking your shipping containers. See coupon below.



MARKING SYSTEMS

Division of Wober Addressing Machine Co. Inc. Mount Prospect, III.

CREATORS OF SYSTEMS AND EQUIPMENT FOR ADDRESSING AND MARKING

Mount Pr	espect, II nd full i	nformation		15-F our shipment
POSITION				
FIRM				
STREET				
CITY		ZONE	ST	ATE

ery shows up in the chart (page 177). Continuing the trend of the earlier recovery (BW-Jun.9'56,p171), trading volume faded fast as stock prices advanced.

Look at the volume on Friday, when the sell-off following news of the President's ailment blasted 12 points out of Standard & Poor's index of 50 industrial stocks, and the volume on the following Monday, when prices recovered sharply. On Friday, volume was strongest in the hours when prices slipped most steeply, except in the turbulent rally of the last half-hour. Then, on Monday, once the opening block of orders that had come in over the week-end was digested, volume faded away to nothing for the rest of the day. Only 2-million shares were traded all day despite the sale of 600,000 shares in the first hour.

• Seventh Birthday—This week, the bull market is seven years old, if you accept mid-June, 1949, as its starting point. Anniversaries always cause some reflection, and market analysts were poking through their charts and statistics and putting their theoretical tools to work in an effect to see if this birthday is the last or not.

Not too surprisingly, the weight of opinion favors caution, if not outright conviction that we are in a bear market already. "The heart attack started it, and ileitis will just provide another little downward push," was the way one analyst summed it up.

More and more market services and investment counsels favor holding large pools of cash, getting out of situations "that no longer show promise." Many of these situations have been topnotch blue chips—as you can see in recent secondary offerings.

"That's one of the most worrisome things about the recent market," says a brokerage house research director. "The quality of selling has been so much higher than the quality of buying."

• Business Picture—Aside from technical factors in the market itself—skimpy upside volume, lack of interest by institutions in committing new funds to commons, to name a couple—market analysts and economists are devoting a large measure of attention to the business picture itself.

The stock market hasn't gone anywhere for nearly nine months—as the 50-industrial index stood at midweek just about where it was before the President's heart attack. But business activity has leveled over an even longer period—this week, BUSINESS WEEK'S index stood just where it was in the third week of July, 1955.

• Worry Spots—One market report this week cites a number of worry spots in the economy: prices of steel scrap, copper, ammonia; tires at retail have weakened recently; automobile production figures are sickly, promise to slump even lower; steel inventories are high, and operating rates may start sliding in the third quarter unless there is a prolonged steel strike; consumer durable sales are "well behind a year ago," but new installment debt in April was up 2.4% over April of last year; new housing starts are 15.7% below 1955, with April off 19.7%.

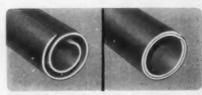
# Some of the Drops-and Rallies

				Thursday Close vs.		
	Thursday	Friday	Monday	Friday	Monday	
Common Stock	Close	Low	Close	Low	Close	
Allied Chemical & Dye	8114.50	\$111.00	\$111.50	-3.1%	-2.6%	
Aluminium Ltd	127.75	120.00	125.00	-6.1	-2.2	
American Home Products	131.25	124.50	126.00	-5.1	-4.0	
Anaconda	74.00	69,12	71.12	-6.6	-3.9	
Atchison, Topeka & Santa Fe	158.00	153.00	157.00	-3.2	-0.6	
Baltimore & Ohio	49.37	46.75	48.00	-6.3	-2.8	
Bethlehem Steel	145.75	140.50	145.25	-3.6	-9.3	
Boeing Airplans	82.12	77.50	82.62	-5.6	+0.6	
Buffalo Forge	34.50	32.50	33.50	-5.8	-2.9	
Continental Oil	117.50	110.25	115.00	-6.2	-2.1	
Corning Glass	75.25	71.00	73.25	-5.6	-2.7	
Ex-Cell-O	87,50	82.50	86.00	-5.7	-1.7	
General Motors	43.25	41.50	43.12	-4.0	-0.3	
International Nickel	93,25	89.25	91.25	-4.3	-2.1	
International Salt	131.00	126.00	126.00	-3.8	-3.8	
Island Creek Coal	42.50	39.50	42.37	-7.1	-0.3	
Kennecott Copper	125.00	118.87	123.00	-4.9	-1.6	
Long Bell Lumber "A"	76.50	73.75	75.75	-3.6	-1.0	
Magma Copper	110.00	101.00	107.00	-8.2	-2.7	
New York Air Brake	30.00	28.25	29.00	-5.8	-3.3	
Reynolds Metals	70.37	66.62	69.62	-5.3	-1.1	
Riegel Paper	36.37	33.75	36.25	-6.9	-0.3	
Royal Dutch	103.00	97.62	102.00	-5.2	-1.0	
Shahmoon Ind	35.25	32.75	34.87	-7.1	-1.1	
Shamrock Oil & Gas	55.00	50.75	52.75	-7.7	-4.1	
Standard Oil (N. J.)	57.12	55.00	57,00	-3.7	-0.2	
U. S. Steel	55,25	52.50	54.50	-5.0	-1.4	
Western Pacific	75.25	71.00	73.00	-5.6	-3.0	
West Va. Pulp & Paper	60,00	56.50	58.00	-5.8	-3.3	
Zenith Radio	112.25	107.00	110.25	-4.7	-1.8	

Elizabeth (N. J.) Fire Department swings into action. Uses latest equipment, like Model 66EB, 1000 gallon Triple-Combination Pumper (foreground), manufactured by The Seagrave Corporation, Columbus, O. Powered by V-12 engine; relies on Bundyweld Tubing for oil and fuel lines.



## Fast, powerful new fire fighter relies on lifelines of Bundy Tubing



Bundyweld is the only tubing double-walled from a single steel strip, copper-bonded through 360° of wall contact. Its unique structure makes it amazingly strong and highly versatile.

Bundyweld is uniformly smooth, inside and out; is remarkably resistant to vibration fatigue. Lightweight, it has unusually high burst strength, can be fa brica ted easily, bends to shortest radii. DISASTER EQUIPMENT, like the rugged fire engine shown here, naturally requires absolutely dependable component parts. That's why you'll find that so many leading manufacturers specify Bundyweld Steel Tubing "lifelines" for oil, fuel, brake, and hydraulic systems.

Compare this record: Bundyweld is the accepted safety standard of the automotive and refrigeration industries. It is used in 95% of today's cars, in an average of 20 applications each! (See exclusive design at left.)

Designers the world over put their faith in Bundy for the finest in tubing plus specialized engineering assistance. New uses are found daily—in both fluid transmission and purely mechanical applications involving strength, flexibility, and low cost. Call, write, or wire today!

There's no real substitute for Bundyweld Tubing

#### BUNDY TUBING COMPANY

DETROIT 14, MICHIGAN

## New Chemi-Groundwood Process COOKS HARDWOOD in Record Volume



The self-contained plant, in operation for over a year, has its own cooking liquor preparation plant, chemical handling and storage facilities.

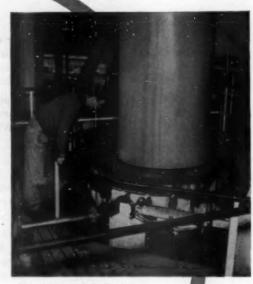
Stone & Webster

Engineering Corporation, utilizing information obtained from the client's extensive pilot plant development, has designed and built the world's first commercial Chemi-Groundwood Pulp Mill.

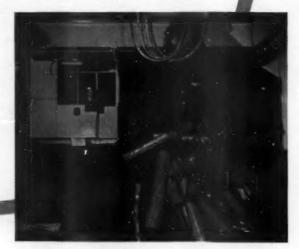
This plant, constructed for Great Northern Paper Company at East Millinocket, Maine, employs pioneer developments and radical departures from previously accepted practice in the pulp and paper industry. The process permits utilization of heretofore little used hardwoods with high yields and at a cost

much lower than that of chemical sulphite pulp. Operation is substantially automatic. At ultimate capacity the plant will cook more than 400 cords of hardwood per day, and daily pulp production will be in excess of 500 tons.

By arrangement with Great Northern Paper Company, we are able to offer to other paper manufacturers the knowledge and experience gained in the successful completion of this project. Write or call our nearest office.



Through this chute 4 foot logs drop into digesters of 30 cord capacity.



A grapple crane removes cooked logs from cooling and leaching water pool,

#### STONE & WEBSTER ENGINEERING CORPORATION

A SUBSIDIARY of STONE & WEBSTER, INC.

#### PERSONAL BUSINESS

BUSINESS WEEK JUNE 16, 1956



You'll have to move fast if you have just decided you would like to charter a boat for a family cruise this summer. The popularity of vacations on the water is so great all over the U. S. that most commercial charters are booked already.

That doesn't mean you have to give up the idea entirely for this season. Yacht brokers such as Sparkman & Stephens, probably the best known in the field, can tell you what is still available. And failing that, you might find it quite simple to arrange to charter a boat from a friend for a period when he won't be using it.

The two major classifications of charter boats are: (1) the auxiliaries (sailboats with auxiliary power), which include sloops, yawls, schooners, and ketches; and (2) power boats, including smaller power cruisers (almost impossible to charter without a crew) and large diesel yachts.

Figure on a minimum charter cost of \$250 a week. That would get you a four-berth auxiliary without a crew, doesn't include food, fuel, or other running expenses. With a crew (usually a captain and a cook), the cost would run \$700 a week up.

Costs of chartering larger boats are usually figured on a monthly basis, but they can be hired for shorter periods. And when you get into larger boats, the charter cost goes up fast.

For example, a four to six berth power boat, including a captain, would run from \$2,200 to \$3,000 a month. Larger diesel yachts with a crew of three or more (captain, cook, steward, deckhand are the usual crew members) runs from \$4,000 up, depending on size. It's not uncommon for the charter cost of a diesel yacht to run between \$3,000 and \$10,000 a month.

For the charter cost, the owner delivers the boat, ready to go, with crew aboard and their wages paid. It also includes the broker's commission and full insurance, which is taken care of by the owner.

However, it does not include running expenses, food for the crew, or any other costs. You sign a charter agreement that states your responsibility, and the responsibility of the owner. You are responsible for repairs and replacements not covered by the insurance.

What about insurance if you charter a boat direct from a friend? Chances are this would be no problem; most of the current insurance policies covering boats have an "omnibus clause," which means that anyone can use a boat with the owner's permission (except a professional) and be covered by the policy.

However, the owner should notify his insurance underwriters that the boat is being chartered for a certain period.

Finding a yachting broker isn't difficult. Most of them advertise in the major yachting magazines, and are located in the main yachting districts—New York, Boston, Miami, San Francisco, Los Angeles. For lake cruising, you'll find brokers in major ports of lake areas, such as Buffalo and Detroit.

You can arrange to charter a boat by mail. Brokers will send pictures and information on the type of boat you want for the period you want it, and you can depend on a reliable broker to give you what you order if it's available.

#### PERSONAL BUSINESS (Continued)

BUSINESS WEEK JUNE 16, 1956 The peak season for summer cruising is July and August. In the East, the most popular cruising area is between City Island, N. Y., and Maine—including Long Island Sound, Cape Cod, Marblehead, Manchester.

In the West, the whole U.S. Pacific coast is popular for cruising.

Don't overlook the big winter cruising season. February, March, and April are extremely popular for cruising around Florida, the Bahamas, and the Leeward Islands. If you're interested in this, it's wise to sign up your boat before Christmas.

The problem of keeping domestic help never seems to ease up. In fact, it is getting worse because domestics tend to go into business and industry where they get more employment benefits.

A new system may do a lot to overcome this—because it guarantees domestics most of those benefits. Called the Graham Paymaster System, it is the technical employer of your domestic. It guarantees them Social Security, workmen's compensation, disability, \$1,000 worth of life insurance, hospitalization and surgical insurance, and unemployment insurance.

The domestic is paid by Graham Paymaster on the day of the week and for the period you specify. You pay Graham once a month, a month in advance. You are billed for whatever wage you pay your domestic, plus 18% to cover the benefits. At the end of the year, both you and your domestic get a statement of the wages paid for income-tax purposes.

Each domestic is investigated and bonded for \$100,000. That means that you are protected against theft—if your maid steals a \$5,000 fur coat, you are reimbursed.

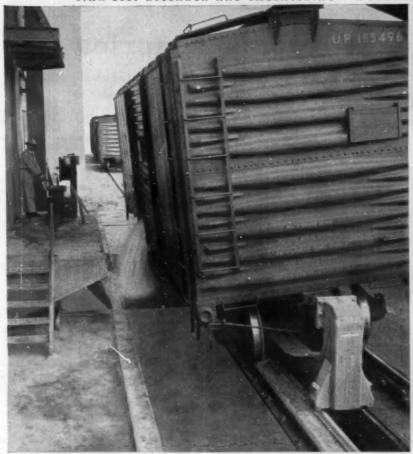
The plan covers all types of domestic help, both part and full-time—gardeners, chauffeurs, maids, social secretaries.

Note that Graham Paymaster is not an employment agency. You hire and fire domestics at will. Once you hire a domestic, you tell Graham you want her as a part of their system. Thus she becomes an employee to Graham only in a technical sense. When she leaves your employ, she is automatically dropped from their system.

A new U.S. customs regulation now permits citizens who are abroad to send home gifts valued at not more than \$10 to as many people as they wish. These gifts are duty-free, and need not be included in the sender's \$500 duty exemption. However, they cannot include perfume, alcoholic beverages, or tobacco.

Many skin rashes result from anxiety and nervous tension. Tests at the University of Maryland School of Medicine have shown that a new anti-tension agent called Atarax is remarkably effective in causing such rashes to subside.

Manners and modes: Seven times as many men as women will die of accidental drowning this summer, according the Metropolitan Life Insurance Co. . . A record number of U.S. college and high-school students will go to Europe this year. . . The current popularity of pink in fashions has affected champagne: One winery reports sales of pink champagne have doubled in six months. . . . Ties with buttonholes, now on the market, may eliminate the tie clip.

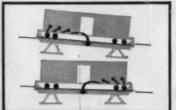


ONE MAN controls operation. Car is automatically centered on platform by hydraulic clamps. Rocking motion moves

material toward door at center. Tilt of car—caused by one rail set higher than the other—causes material to discharge.



controls—hydraulic control valves and pushbuttons for drive and pump motors—are grouped in compact unit for convenience.



PLATFORM functions as a see-saw ends alternately rise and dip approximately three inches.



WRITE FOR FOLDER 2645 for a more detailed description of this unusual and efficient unloading method.

#### New safety, economy in bulk unloading

Link-Belt Kar-Flo uses unique "rock 'n roll" action to empty up to four boxcars per hour of free-flowing materials

LINK-BELT Kar-Flo represents a complete departure from conventional unloading methods. It uses a gentle, rocking action that slashes cost requirements for unloading grain, chemicals and other free-flowing bulk materials.

Most significant saving is in installation—made exceedingly simple by Kar-Flo's shallow pit and low overhead clearance. Further economies result from low power and maintenance requirements. In addition, Kar-Flo induces smooth material discharge that reduces dust and degradation . . . improves working conditions.

In addition to the Kar-Flo for medium capaci-

ties, Link-Belt makes a tilting grain car unloader for volume operations and a power unloading scoop for small-capacity requirements. For immediate engineering assistance, contact your nearest Link-Belt office. Or for more information on this and the other Link-Belt unloading methods, write LINK-BELT COMPANY, Dept. AV, Prudential Plaza, Chicago 1, Ill.



One source . . . one responsibility









#### **Builders of Future America**

Excerpts from a recent address by Roger M. Blough, Chairman of the Board, United States Steel Corporation

"Somewhere in this day's twilight there is a boy sitting alone. He may be your son or a neighbor's son.

He is thinking about his most pressing obligation — what to do with his life, what to make of himself.

"Out of nowhere, perhaps, will come the realization that he will find personal growth and confidence and the full life if he can only make a plane that will fly better in the air, or a machine that will run better on rails, or if he can make a device to lessen human drudgery in the home, or build a home so beautiful and so full of human satisfaction that it will excel all that has gone on before.

"For this boy . . . the answer may lie in the insatiable demands for fuel from under the ground and for power to turn the wheels of industry. Or for him, a deep-seated satisfaction may come from learning and knowing that the unfathomable atom can be harnessed.

"Somewhere in that young valiant mind... will emerge the image of men of science and men of engineering who became what they are... in the dedicated hope that their chosen career may afford them at least one fleeting moment of major achievement.

"That boy, though he may say little, will see in you, and the others like you, the builders of America. And when he sees that much, every thoughtful boy . . . will see a little more. He will see himself grasping your work, building mightly upon what you have built . . . He will see the great challenge of America for his own work and for his own life."

Today, when every effort is being made to focus public attention on the acute shortage of technical manpower, these excerpts from Mr. Blough's address are especially timely. They are printed here in the hope that they will remind Fathers — thinking of their son's careers — of the challenging opportunities the America of tomorrow offers men trained in the fields of science and engineering.

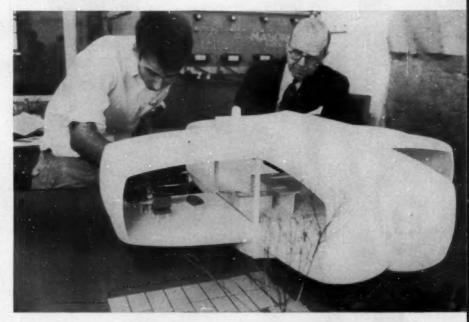
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Product development, the plastics industry has decided, is the key to its boom. At Monsanto, the discovery of new plastics applications is the job of Ralph Hansen (extreme right). His pet project is an all-plastics house. Other chemical companies are taking the same tack in their approach to . . .



#### Plastics: A Market You Can Mold

Right now plastics are enjoying the biggest boom ever. All of the 15 basic chemical resins have been growing like weeds. Production of polyethylene, a relative newcomer to the plastics family, has multiplied more than 10 times in six years. Even such oldtimers as the cellulosics, which made their debut in the 1880s, have grown more than 50% in volume since 1949.

· Boom Behind a Boom-But despite

the whopping 3½-billion lb. annual market in plastics, the chemical companies making plastic resins are not satisfied to coast along with this happy state of affairs. That's because the boom in plastics is not something that happened completely by accident. The resin makers did a lot to generate it themselvesthrough application testing and product engineering. And they are expanding in this direction at such a fast clip that

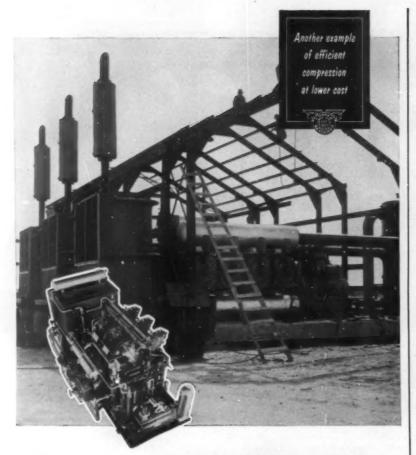
some people in the industry are saving the surface has hardly been scratched in potential uses for plastics. Already, the product engineers have come up with an all-plastics house. They recognize no boundaries, are using plastics for anything from aircraft to tiny gears.

There's a touch of irony in the situation, though. The chemical companies went into product engineering very re-luctantly. Before World War II they concentrated research on chemical processing that would increase their yield or produce new resins. It seemed to them like a logical enough approach since they didn't turn out end-products. From the first, they had to provide fabricators with technical information on how to mold and process plastics-very few people getting into the fabricating end of the business knew anything about these things. Still, the resin producers could supply very little information on the properties of their plastics after they had been molded into products. Plenty of mistakes were made, and plastics as a generic term became associated with low-grade products, something they are still trying to shake

· Shift in Emphasis—Then beginning about 10 years ago the resin makers shifted their emphasis toward application and fabrication research as opposed to pure chemical process development. And it didn't take them long to see that they had come across a good thing. They realized the plastics business can



PLASTIC AGITATOR for washer is examined by Barrett's traveling designer Bob Rockwood (left) and Harold Hoppens, D. E. Cordiner technical chiefs.



#### How to get a "RUNNING START" on lower compressor costs!

• Where plans call for engine-driven compressor service up to 720 hp, you can have completely packaged Cooper-Bessemer units in and running, quicker, and at much lower cost than ever before possible. Current experience proves it!

For example, shown above during construction is the compressor station for United Carbon Company's new natural gasoline plant. Its three packaged Cooper-Bessemers are already installed . . . completely preassembled, including pre-piped cool-

ing, lube oil, fuel and starting systems. Plenty of on-the-site work was eliminated and the station cost less to complete than any of the company's previous compressor stations.

Whether your plans call for similar units, larger engine-driven units or motor-driven compressors for any service you can name, you're off to a "running start" on lower costs when you find out about the new things being done by one of America's oldest engine and compressor builders.

"... you can't discount the importance of product development ..."

STORY starts on p. 185

be partly defined as a flood of new products. It could go almost as far as their engineers' imaginations.

So today, the chemical companies are pouring millions into new labs to shape a bigger market in resins for themselves and to meet the demand of their customers for more kinds of resins and more reliable sophisticated engineering and design data.

 Other Factors—You can't tie the boom in plastics entirely to product development by resin producers. There are other factors that are involved, too: Plastics are able to do jobs that no other materials can handle, molders now possess more knowhow, advances have been made in basic research, marketing and promotional efforts have been stepped up.

But you can't discount the importance of product development. The molders recognize this as well as the resin producers. William T. Cruse, executive vice-president of the Society of the Plastics Industry, made up of resin makers and molders, believes that much of the industry's future growth depends on the continuing efforts of the resin manufacturers along product development lines.

 How It Pays—For their part, the chemical companies believe their technical services to fabricators pay off in several ways.

Obviously, they are a direct selling tool: Sales managers are almost unanimous in admitting that molders and end-product manufacturers have come to expect the help of the plastics technical representatives. They say they'd have a hard time selling if the services were cut out.

But even more important, most resin makers see the program as their chief source of industry intelligence on how their materials are performing in service. It provides an indicator for research on resin modifications. Without close technical contacts with customers, the resin makers would be almost completely isolated from end-product performance and production data, since they manufacture and sell no end-products.

 Testing—As a rule, plastics molders are cooperative about running tests on new plastics for the chemical outfits. It has been their experience that close technical cooperation frequently saves them money by increasing yield, shortening molding cycles, and producing a better and more salable product. But,



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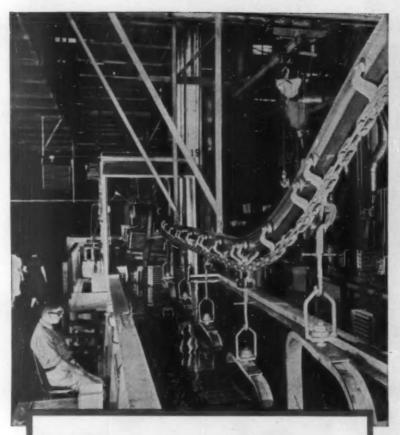
Moreover, by carrying the "makings" of new highways, by carrying more and more truck trailers in "piggyback" service, by welcoming each new idea for transport progress, the railroads are working side by side with all forms of transportation in shaping the exciting traffic pattern of tomorrow.

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"... 'the plastics business thrives on new resin products,' says one Monsanto executive ..."

STORY starts on p. 185

while molders are eager to work on short-range projects that pay off in direct results, they are understandably reluctant to take on the full job of testing scores of resin modifications. Most of them can't afford the time or engineering staff required, and few maintain the elaborate testing equipment needed.

So the job of product testing has fallen back on the resin makers. And in recent years it has become one of the fastest expanding efforts in the

business

The general trend is toward setting up extensive facilities that duplicate customers' production equipment. These are surrounded with laboratories that bulge with testing gear to give accurate data on the properties of products. The labs and pilot facilities turn out reams of reports containing almost all pertinent design specifications and production information, from relatively simple properties such as tensile and impact strength to extremely complex data on creep-temperature relationships and flow properties for molding resins.

The result, plastics producers hope, eventually will be to establish several basic resins as true commodities—so you can order plastics materials on much the same basis as, say, an alloy

steel

• New Resin Products—But that can take place only if the rush of new resins slows down. Right now, there's little sign that it will. "The plastics business thrives on new resin products," says one Monsanto sales executive. "We've got to keep hopping to stay ahead of the competition. You can see what we face in the single example that in the last six months, two of our competitors have introduced nine new polyethylene resins, and just over the horizon is a whole new batch that will come out when the low pressure processes start producing temperature resistant rigid polyethylenes."

• Big Investment—You get an idea how deeply the chemical companies are plunging into product development from their investment in plant and

equipment:

• Du Pont last year opened a \$5million Sales Service Laboratory near Wilmington that headquarters the corporation's product development and technical service activities.

 Bakelite Div. of Union Carbide is completing a huge multi-million dol-



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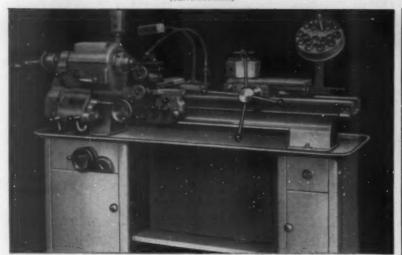
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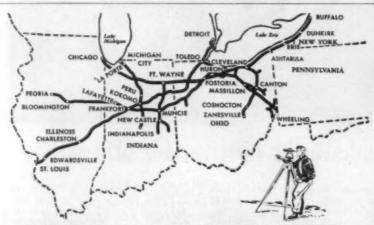
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#### NEW LATHE ACCESSORIES cut machining costs

Delta, pioneer power tool manufacturer, has introduced a group of production accessories (shown above) that double the usefulness of its 11" metal cutting lathes. At very low cost, they convert the Delta engine lathe (widely used for toolroom, maintenance, and experimental work) into a ram-type turret lathe for production

work requiring multiple machining operations. The new accessories—Precision Bed Turret, Turret Tool Post, Lever-type Collet Closer, and Coolant Group—can be used with either 4 or 5-foot bed Delta lathes. For details write: Delta Power Tool Div., Rockwell Manufacturing Co., 540DN. Lexington Ave., Pittsburgh 8, Pa.



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"... new entrees have given high priority to product development and customer service facilities ..."

STORY starts on p. 185

lar addition to its applications research labs in Bound Brook, N. J.

 Dow Chemical opened its first technical service lab in 1948 as a liasion group between chemical processing research and sales. Now the lab is an independent division reporting directly to management with more than 175 people on the payroll.

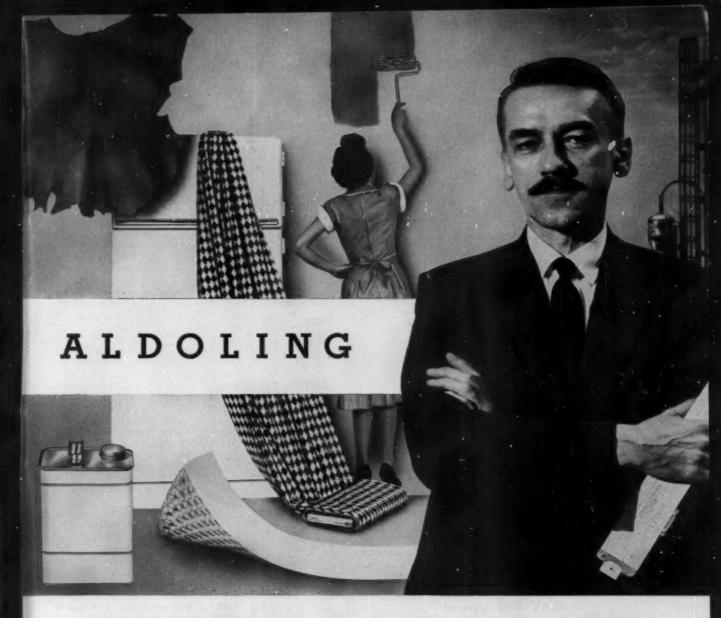
• Barrett Div. of Allied Chemical & Dye maintains customer service labs in Toledo and at Shadyside, N. J., across the river from New York. Together, the two labs average about 200 customer contacts per month. That is double the number of contacts in 1954, the company reports. Barrett also has a full-time industrial designer who travels about the country in a station wagon loaded with presentations and examples of good design in plastics.

Others, too, are deeply involved in development activity. Rohm & Haas, producers of Plexiglas, hired its first product designer in 1944. Now the company has five full-time designers. New entrees in the plastics field, such as W. R. Grace, have given high priority to the establishment of product development and customer service facilities.

Only occasionally do molders complain that the resins producers should cut out the expense of the product development program and pass along the savings to the molders. "I tell them that their attitude is shortsighted and benighted," says Cruse of SPI. "They can't possibly afford to do research in

the quantity and quality needed."

• No Reversal in Sight—There is little chance that the chemical companies will reverse themselves on product development. Management in this industry is solidly behind more and broader applications work. Monsanto is currently setting the pace with broad attacks on whole segments of industry. Their model of the all-plastics house, unveiled at this week's Plastics Exposition in New York-is a harbinger of bigger things to come. The company actually will construct the house as a continuing experiment on the use of plastics in construction. Mike Gigliotti, who heads the program, sits in his plastics-walled, plastics-furnished office and says, "If we run into a structural application that looks good, but we don't have the material at hand, the chances are we can develop one to do the trick-that's plastics." END



#### CELANESE REFINES A CHEMICAL PROCESS AND CREATES A RICH NEW SOURCE FOR PRODUCT IMPROVEMENTS

Synthesizing organic chemicals by aldol condensation is a standard processing method. But now through the refinements introduced by Celanese, Aldol Production has suddenly taken on new meaning for manufacturers in many fields.

Celanese Aldoling has the efficiency, economy, and capacity of compactness. In place of single aldol units, there is one consolidated aldol installation which utilizes specially developed techniques and depends only upon Celanese-produced aldehydes and ketones. A typical end product is trimethylol-propane.

A few short months ago, trimethylolpropane was just a polyol with high promise to producers of alkyd resins and

polyurethane foams. But it was too expensive; its supply questionable. Today, higher purity trimethylolpropane is available from Celanese in continuous commercial volume...and at a price that makes it competitive in all applications.

Similarly released by Celanese Aldoling for full commercial development: methyl isopropenyl ketone and 3-methoxy butanol. Other high potential chemicals are in the development stage.

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#### PRODUCTION BRIEFS

Computers get a MAID: A machine that keeps an eye on computers will be used by the Air Force's Air Research & Development Command. The MAID (Monrobot Automatic Internal Diagnosis), built by Monroe Calculating Machine Co., keeps a constant check on parts and operations of electronic computers, and signals failures of vacuum tubes or germanium diodes.

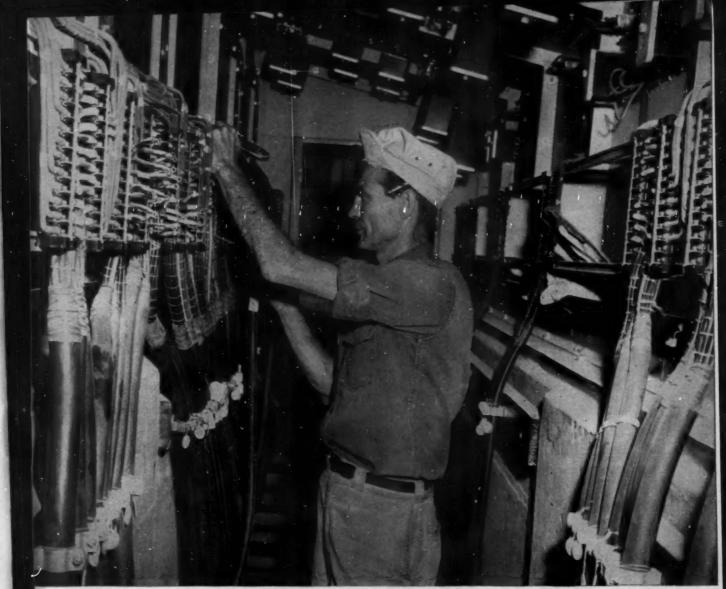
Heavy bombers will be painted right in the hangar of Boeing Airplane Co.'s Moses Lake Flight Center in eastern Washington State. The company is building a large hangar for finishing the exteriors of B-52s produced at Seattle. The \$4.7-million paint shop will consolidate all painting operations previously done in different parts of the plant.

A subterranean plant will go down under a mountain site that American Machine & Foundry and Mason & Hanger-Silas Mason-builders of underground passageways—are purchasing for \$315,000 in the Green Mountains near Huntsville, Ala. According to the companies, the solid limestone is easy to excavate and can be sold. The plant, whose purpose has not yet been disclosed, will have a constant temperature of 63F.

Boral, a material used for shielding against neutrons, has been placed on the open market for the first time by Brooks & Perkins, Inc., Detroit magnesium fabricators. Previous use was limited to AEC installations. Boral has a core of boron carbide and aluminum uniformly mixed together and covered on both sides with aluminum sheet. A 4-in. plate with 35% boron carbide content gives protection equal to 26 in. of concrete.

A gas-cooled reactor of the type approved by the British for large-scale power production has been selected by AEC for experimental and design work. AEC will invite industry to participate in the \$4-million project at the national reactor testing station at Arco, Idaho.

A second giant extrusion press will be installed by Aluminum Co. of America at its Lafayette (Ind.) works. Alcoa will own the \$9-million, 14,000-ton press, which can produce parts weighing up to 2,500 lb. The Air Force owns the other press, but Alcoa has been operating it under lease since 1954. The new giant will help meet the growing demand for high-strength aluminum alloy extrusions for military and defense needs.



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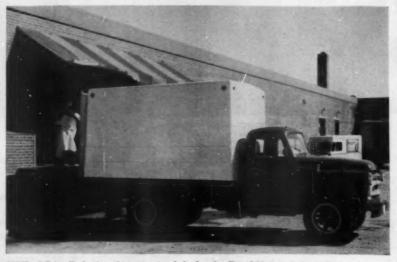
GOODYEAR's wide, soft Terra-Tire, developed for light airplanes in rugged use . . .

#### Takes the Jolts Out of Landings

Landing light planes on plowed fields and other rough ground probably will give pilots fewer gray hairs if the planes are equipped with new tires developed by Goodyear Tire & Rubber Co. The company says its barrel-shape Terra-Tires (picture) are the softest and lowest-pressure tires ever mounted on aircraft. They are kin to the Goodyear

Terra-Tires that are being used on many off-the-road trucks and trailers.

The airplane Terra-Tires are 24-in. wide, carry pressure of 3 psi. to 8 psi., are designed to absorb or conform to uneven surfaces, and to glide over soft and muddy areas without bogging down. They can also be used on concrete and sod airplane runways.



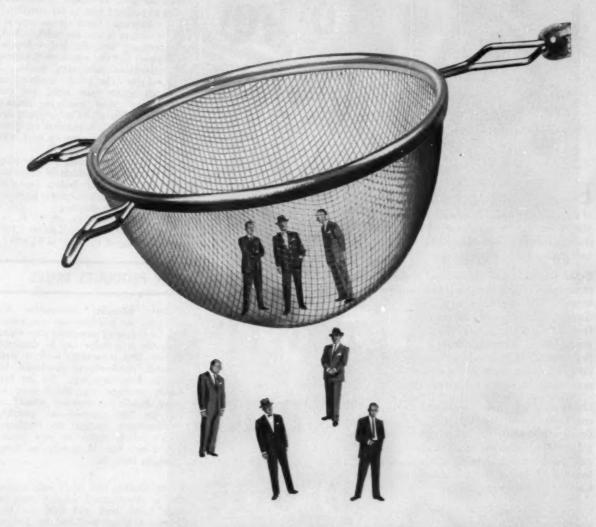
HEIL CO.'s all-plastic refrigerator truck body, the Frigid-Van, is light and . . .

#### Keeps the Load's Temperature Down

Refrigerated truck manufacturers have been using laminated plastics more and more frequently to insulate the bodies of their vehicles. Now, one of the makers, Heil Co., Milwaukee, has gone all the way with plastics in putting together a new truck body (picture). The sides and top of Heil

Co.'s Frigid-Van are made of a onepiece plastic molding. They're attached to the Frigid-Van's matching, one-piece, plastic floor.

The trucks are an outgrowth of large truck-mounted plastic tanks and tank trailers that the company has been making for several years. Heil Co. claims



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222 West Adams Street, CHICAGO 6 722 South Spring Street, Los Angeles 14

100 East 42nd Street, New YORK 17

112 Pine Street, San Francisco 6

profit

## Commercial Credit

A service available through subsidiaries of COMMERCIAL CREDIT COMPANY capital and surplus over \$190,000,000 its newly developed truck bodies are:

 Leak proof: No cool air escapes from the truck, and there are no metal parts to conduct heat to the outside.

Spacious: There are no supporting structures inside the truck. And, the company says, the bodies require only about half the insulation thickness of conventional refrigerated trucks.

• Light: The plastic construction is much lighter than metal, and the Frigid-Vans' foam insulation doesn't pick up moisture. (The company reports that some conventional refrigerator truck insulation picks up from 400 lb. to 500 lb. of moisture.)

Cheap to maintain: In the plastic truck, the big problem of corrosion is eliminated. The bodies can also be molded from colored plastic to eliminate the need for pointing.

nate the need for painting.

The first Frigid-Vans are 12 ft. by 73 ft. by 64 ft. and weigh about 2,100 lb. The price of the body is \$2,300.

#### NEW PRODUCTS BRIEFS

Relative humidity information for checking air conditioning equipment and for industrial processing jobs where humidity is a factor can be obtained quickly and accurately with a new portable psychrometer developed by Bendix Aviation Corp. To get humidity readings, you don't have to swing Bendix's instrument around in the air like conventional portable psychrometers. Instead, the Psychron, as it's called, makes its own breeze with a tiny fan. It operates on three flashlight batteries.

Plastic shuttles that don't wear out as fast as conventional wooden ones as they weave back and forth on the loom are being produced by Draper Corp., Hopedale (Mass.). The company estimates that the phenolic plastic shuttles, which cost up to twice as much as wooden ones, can last from 2½ to 4 times as long.

Weighing liquids and gases continuously while they pass through pipes is the job of a new instrument developed by Inertial Instruments, Inc., Santa Monica. Its first applications will be on fuel lines of several new jet planes. The unit will replace conventional measuring gear and the complicated electrical systems used to correct gallonage readings.

Tiny television camera, said to be the smallest yet, has been developed by Lockheed Aircraft Corp. Measuring only 2-in. by 1½-in. by 5-in., the unit will be first used to watch various parts of airplanes during tests.



THE MEASURE

is in his work, how and whether he lives it. Measure Elmer Parks, Class A machinist in Stuttgart, Arkansas. You'll find the quiet certainty of the craftsman. You'll find the satisfaction of the Arkansan, knowing his day's work was well done. Here is where Fairbanks-Morse chose to build its precision pumps. The Arkansas Industrial Development Commission, State Capitol, Little Rock.

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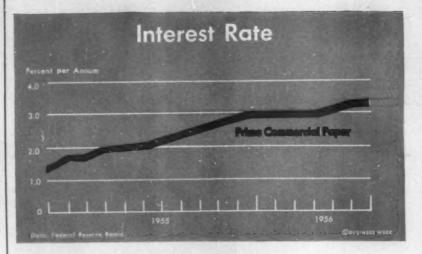
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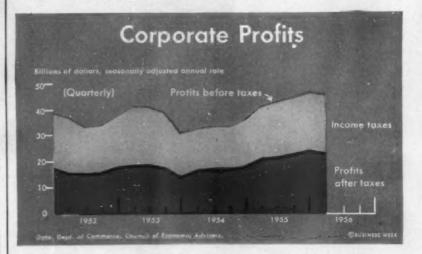


#### **Borrowing Costs More**

Last month dealers hiked the interest rate on prime commercial paper one-eighth of 1%. This was the second increase so far this year. It brought the annual rate to 31%%—the highest since the early months of 1932. Last April, the rate was boosted to 314% from 3%.

A year ago, the annual rate was 2%, up from between 1¼% and 1%% at the beginning of 1955.

The reason for the recent rise was a searcity of short-term funds, which were in demand as the June 15 corporate income tax deadline approached.



#### A Move Downward

Corporate profits, after seasonal adjustment, for the first quarter of 1956 slipped below the preceding quarter, preliminary estimate of the Council of Economic Advisors shows. But profits were well above the first quarter in 1955. The decline for the first three months of this year interrupts a pattern of sharp and continuous rises that began during

the third quarter of 1954.

First-quarter profits before taxes were off \$1.3-billion from the end of 1955. After taxes, they were down \$600-million. There had not been a decline in corporate profits between any last and first-quarter since 1952. The decrease this year is attributed to costs rising faster than prices.

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#### A Step Forward in Steel Bargaining

Just as the auto industry resents the suggestion that its Supplementary Unemployment Benefit programs are in the genus Guaranteed Annual Wage, so the steel industry bridles when the technique it is using in current labor negotiations is described as industrywide bargaining. Yet what the steel companies are doing now is certainly a change from what they have done in the past and a change in the unmistakable direction of industrywide bargaining.

Tandem bargaining is perhaps the best quick description of how steel dealt with its union up until this month's new contract negotiations got under way. One company—U. S. Steel, except for one year when Bethlehem took the slot—did all the haggling with the union. If an agreement wasn't reached peacefully, the whole industry was struck, and it waited passively until the one company found settlement terms. Then, all the other producers signed for the identical terms that the one company had accepted. Invariably there was growling from other managements at what the "big fellows" had settled for, but the system continued year after year.

Tandem bargaining has, from the employer's point of interest, all of the major disadvantages of industrywide bargaining and none of its advantages. There is some real value to employers, if one wage contract is going to blanket them all, to have the marginal companies represented at the bargaining table. The less prosperous firms are then in a position to exercise a veto power over a bargain that is just too rich for them to take. Individual bargaining is, of course, more realistic and greatly preferable, but the steel industry has never tried it and apparently won't in the discernible future.

This year, John Stephens for U.S. Steel is only one among three equals who represent U.S., Bethlehem, and Republic in negotiating the fateful 1956 contract. It would be better, we think, if all the basic steel producers who will sign the contract ultimately written were represented at the bargaining table—that is, as long as individual bargaining isn't going to be tried. But what is happening this year makes more sense than what prevailed in the past. We hope that it augurs a peaceful, satisfactory settlement.

#### Money for Theorizing

The Ford Foundation has launched a new \$234-million program designed to enrich our sum of economic knowledge. It is providing this fund to "enable leading economists to conduct research of their own choosing."

This is a new approach to throw more light on the so-called "dismal science." Almost all of the money spent by foundations on economic research has been devoted to group projects, which have used the largest part of their funds for compiling statistical studies. In fact, the great economic advances made in the past few decades can be traced to the wealth of statistical information at our disposal.

With so much weight attached to this phase of economics, the work of theorizing has been lagging. This is true of monetary policy (BW—Jun.2'56,p180) and other fields of economics.

The work of advancing our theoretical knowledge is rarely the result of group thinking. On the contrary, most of the important concepts that are now in use come from individuals working alone. We do not expect all the grants made under the Ford Foundation's new program to bear fruit, but even if only one or two of the recipients can advance the frontier of knowledge, the program will be worthwhile.

#### Not Too Proud to Fight

During the last few months, U. S. participation in the International Labor Organization, long the target of some business groups' sniping, has been under increasingly hot fire. It is now charged that Communistic and Socialistic ideas have smothered ILO in an intolerable miasma, that delegates sent by workers and employers from Communist countries are really just government "mouthpieces" and, as such, defeat ILO's tripartite structure.

This week, delegates and advisers from 73 countries, including the U. S. and Russia, are in the second week of the annual ILO conference at the Palais des Nations in Geneva. They are pondering questions affecting worldwide working conditions. But the most bitter debate centers around the seating of Iron Curtain nation non-government delegates. Eight Soviet-bloc employer delegates have been seated tentatively in working committees. Their status, and that of similar delegates, won't be clear for another 10 days. If these delegates are seated, the U. S. Chamber of Commerce and the National Assn. of Manufacturers say they will urge U. S. withdrawal from ILO.

No one doubts that the Soviets use the ILO forum to disseminate their divisive propaganda just as they abuse every other rostrum. But to leave the field to the Communists by default seems a strange and dangerous tactical move—virtually an admission that we are unable to compete. We think the U.S. should stay and, through its worker, employer, and government representatives, provide vigorous leadership to the world's anti-Communist forces within the framework of the ILO, as well as in all other forums open to us.

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H. Wells Drake, micro-chemist, analyzes sludge sample at one of the 16 laboratories Socony Mobil maintains throughout the U.S.

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